

**FINAL ENVIRONMENTAL ASSESSMENT
FOR OKALOOSA COUNTY WASTEWATER
TREATMENT FACILITY
EGLIN AIR FORCE BASE, FLORIDA**

(RCS 02-444)

**DEPARTMENT OF THE AIR FORCE
Eglin Air Force Base, Florida**

April 2004

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FINDING OF NO SIGNIFICANT IMPACT
FOR
OKALOOSA COUNTY WASTEWATER TREATMENT FACILITY
EGLIN AIR FORCE BASE, FLORIDA
RCS 02-444

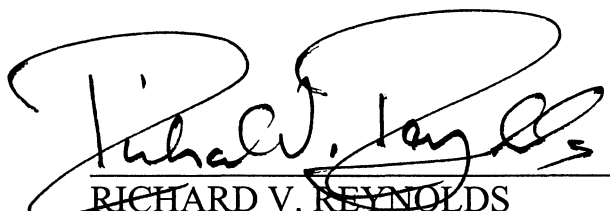
Pursuant to the Council on Environmental Quality and US Air Force regulations for implementing the National Environmental Policy Act (40 Code of Federal Regulations (CFR) Parts 1500-1508 and 32 CFR Part 989, respectively), the Air Force has conducted an Environmental Assessment (EA) on a proposal to grant Okaloosa County a 25-year lease of Eglin Air Force Base (AFB) property for the construction and operation of a new wastewater treatment facility (WWTF) and associated rapid infiltration basin system (RIBS). The final EA, *Okaloosa County Wastewater Treatment Facility, Eglin AFB FL*, was published in April 2004, and is hereby incorporated into and made a part of this finding.

DESCRIPTION OF PROPOSED ACTION

Proposed Action: The proposed action is for Okaloosa County to construct and operate a new, 9.6 million gallon per day WWTF and associated RIBS on 255.5 acres on Eglin AFB. The Air Force would execute a 25-year lease. The proposed site lies within the approximately 676 acres which Okaloosa County currently leases from Eglin AFB for operation of a wastewater effluent sprayfield. When the WWTF and RIBS are operational, the county would cease operating the sprayfield and their lease on the remaining 420.5 acres would be terminated.

FINDING OF NO SIGNIFICANT IMPACT

Based on my review of the EA, including comments received during the public comment period, I conclude that the proposed action would not have a significant adverse impact, either individually or cumulatively with other foreseeable actions, on the quality of the human or natural environment. This analysis fulfills the requirements of the National Environmental Policy Act, the Council on Environmental Quality's regulations, and the Air Force Environmental Impact Analysis Process, and an environmental impact statement is not required and will not be prepared.


RICHARD V. REYNOLDS
Lieutenant General, USAF
Vice Commander

13 Sep 04

Date



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LIST OF ACRONYMS, ABBREVIATIONS, AND SYMBOLS

96 AMDS/SGPB	96 th Bioenvironmental Engineering Flight
96 CEG/CERX	96 th Civil Engineer Group/Long Range Plans
96 CEG/CERR	96 th Civil Engineer Group/Real Estate Office
AAC	Air Armament Center
AAC/EMC	Environmental Management Directorate, Environmental Compliance Division
AAC/EMCE	Environmental Management Directorate, Environmental Compliance Division, Environmental Engineering Branch
AAC/EMH	Environmental Management Directorate, Historic Preservation Division
AAC/EM-PAV	Environmental Management Directorate, Public Affairs
AAC/EMR	Environmental Management Directorate, Restoration Division
AAC/EMSN	Environmental Management Directorate, Stewardship Division, Natural Resources Branch
AAC/EMSP	Environmental Management Directorate, Stewardship Division, Environmental Analysis Branch
AAC/JAV	Air Armament Center/Environmental Law Division
AAC/SEOG	Air Armament Center/Ground Safety Element
AAC/SEU	Air Armament Center/Range Safety Section
USACE	U.S. Army Corps of Engineers
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
BASH	Bird/Wildlife Aircraft Strike Hazard
BHPO	Base Historic Preservation Office
BHWG	Bird Hazard Working Group
BMP	Best Management Practice
CEC	Cation Exchange Capacity
CEQ	Council of Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COC	Communities of Comparison
CRD	County Road Department
CRM	County Road Maintenance
CWA	Clean Water Act
dB	Decibel(s)
DoD	Department of Defense
EA	Environmental Assessment
EBS	Environmental Baseline Survey
EIAP	Environmental Impact Analysis Process
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FFWCC	Florida Fish and Wildlife Conservation Commission
FONSI	Finding of No Significant Impact
ft²	Square Feet
g/cm³	Grams Per Cubic Centimeter
GIS	Geographic Information System
gm	Grams
Hz	Hertz
IRP	Installation Restoration Program
lb	Pound
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Sound Level

LIST OF ACRONYMS ABBREVIATIONS, AND SYMBOLS CONT'D

MCD	Mosquito Control District
MCL	Maximum Contaminant Level
meq	Milliequivalents
MF	Membrane Filter
mg/L	Milligrams Per Liter
MGD	Million Gallons Per Day
MPN	Most Probable Number
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NIOSH	National Institute of Occupational Safety and Health
nm	Nanometers
NOI	Notice of Intent
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
pH	Measure of Acidity
PM₁₀	Particulate Matter Equal to or Less Than 10 Microns in Diameter
PM_{2.5}	Particulate Matter Equal to or Less Than 2.5 Microns in Diameter
ppm	Part Per Million
RCRA	Resource Conservation and Recovery Act
RCW	Red-cockaded Woodpecker
RIBS	Rapid Infiltration Basin System
ROI	Region of Influence
SEL	Sound Exposure Level
SHPO	State Historical Preservation Officer
SIP	State Implementation Plan
SOP	Standard Operating Procedure
SO_x	Sulfur Oxides
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
µg/L	Micrograms Per Liter
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
UV	Ultraviolet
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WWTF	Wastewater Treatment Facility

1. PURPOSE AND NEED FOR ACTION

1.1 PROPOSED ACTION

The Proposed Action is for Okaloosa County to construct, operate, and maintain a new replacement wastewater treatment facility and associated Rapid Infiltration Basin System (RIBS) on 255.51 leased acres. A 25-year lease will be executed at the Air Force Level (Figure 1-1). The site is currently under lease to Okaloosa County for a wastewater effluent sprayfield, the use of which would be discontinued under the proposed action.

1.2 NEED FOR PROPOSED ACTION

The original 24-acre sprayfield was developed in 1971, and since its inception, the sprayfield area has been expanded to 676 acres. In 1982 the wastewater treatment facility was permitted to accept 5.0 million gallons per day (MGD), and in 1995 permitted capacity was increased to 6.5 MGD.

Due to the increased population growth, area development, and additional wastewater from Okaloosa Island that is being pumped to the wastewater treatment facility, it is approaching its design capacity. The latest Capacity Analysis Report indicates that the design capacity will be reached during the summer of 2007. Rule 62-600.405 (8), F.A.C. establishes planning, design, construction, and operational status milestones that are based on the projected time to the facility reaching its permitted capacity. Accordingly, with a projected time of summer of 2007 as stated in the Capacity Analysis Report, the following schedule must be met:

- Begin preparing construction plans and specifications for new or expanded treatment and disposal facilities for all flows above 6.5 MGD by July 2003.
- Submit Construction Permit Application with plans and specifications for new or expanded treatment and disposal facilities for flows above 6.5 MGD by July 2004.
- Submit an Operational Permit for the expanded facilities by January 2007.

1.3 OBJECTIVE OF THE PROPOSED ACTION

The objective of the Proposed Action is to provide acreage for the construction, operation, and maintenance of a new replacement wastewater treatment facility and associated RIBS.

1.4 RELATED ENVIRONMENTAL DOCUMENTS

No related NEPA documents were found. Relevant studies and surveys are included in Section 8, References and Applicable Documents.

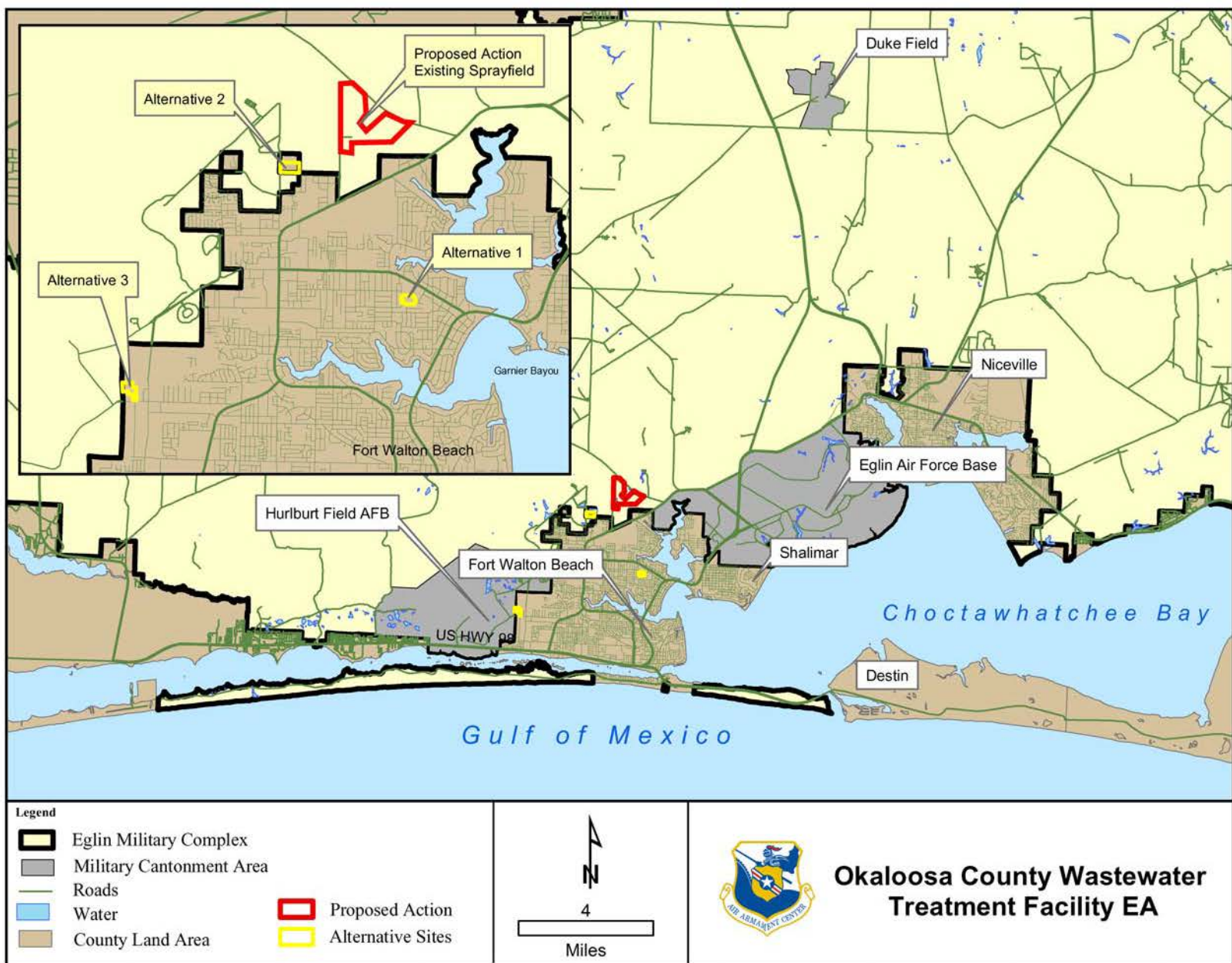


Figure 1-1. Location of Proposed Action

1.5 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

This document was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations of 1978, and the Air Force's Environmental Impact Analysis Process (EIAP) (Title 32 Code of Federal Regulations Part 989). To initiate the environmental analysis, the proponent Okaloosa County, through the Real Estate Office (96 CEG/CERR), submitted an Air Force (AF) Form 813 – Request for Environmental Impact Analysis– to the Air Armament Center/Environmental Management Directorate, Stewardship Division, Environmental Analysis Branch (AAC/EMSP). Okaloosa County proposes to construct a new replacement Wastewater Treatment Facility and associated RIBS on Air Force Property. A review of the AF Form 813 by EMSP determined that the Environmental Impact Analysis Process (EIAP) Working Group should address the Proposed Action.

1.5.1 Issues Eliminated from Detailed Analysis

None

1.5.2 Issues Studied in Detail

Preliminary analysis based on the scope of the Proposed Action identified the following potential environmental issues warranting detailed analysis.

Land Use

It is necessary to evaluate potential land use conflicts that could occur from construction and operation of the Wastewater Treatment Facility (WWTF) and RIBS.

Noise

Construction activities may result in adverse impacts to the public in the surrounding area. The extent to which noise associated with the construction activities would impact the public under the Proposed Action and Alternatives will be assessed.

Physical Resources

Physical resources are described as the physical environment as it relates to the atmosphere (air quality, climate, and meteorology), geomorphology (landforms, terrain, topography, and soils), geology (underlying land formations), and hydrology (surface and ground waters). Analysis in this area focuses on identifying those resources that would be impacted by the Proposed Action and the resulting consequences to the quality and utility of those resources.

Air Quality

Air quality could be affected by the addition of combustive by-products to the air resulting from the construction and operation of the facility. Potential impacts would result if project emission estimates, using U.S. Environmental Protection Agency (USEPA) emission factors, were to exceed 10 percent of Walton County's Air Emission Inventory. Although analysis of this type is used for impacts analysis to air quality in accordance with a General Conformity Rule determination,

which is used as a threshold for impact analysis for non-attainment or maintenance areas (areas that were non-attainment but now are in attainment) regarding USEPA air quality standards, a general conformity determination does not apply to Eglin, as Eglin is within an attainment area. However, the 10 percent criteria is used here as a threshold for potential adverse impacts.

Soils

Construction of the WWTF and RIBS may contribute to the erosion potential of soils in the project area. Soils in the project area, as well as potential impacts and management requirements for minimizing impact potential, will be identified.

Water Quality

The Proposed Action creates the potential for impacts from erosion and runoff to surface waters and wetland areas. Potential impacts are defined as impacts to the quality and utility of water resources resulting from point and non-point source runoff. A Notice of Intent (NOI) for addition of paved surfaces and a National Pollutant Discharge Elimination System (NPDES) permit would be required for extensive clearing activities.

Wetlands

Wetland impact analysis identifies wetland areas within the project area, determines the potential for impacts, and establishes management requirements in order to ensure that wetland impacts are avoided.

Biological Resources

Biological resources (plants and animals) and related habitats (foraging and nesting areas) may be directly affected by the Proposed Action and Alternatives. Impacts analysis focuses on the potential for actions to directly, physically affect biological organisms (threatened and endangered species) and the potential for actions to alter/affect the quality and utility of the habitats (i.e. wetlands and foraging areas) frequented by those species.

Habitat Alteration/Direct Physical Impacts to Sensitive Species

Project-related activities may result in habitat alteration and/or impacts to sensitive or threatened and endangered species. Analysis focuses on quantifying, to the extent possible, habitat alteration (i.e., tree clearing), identifying any sensitive species within the project area, analyzing the potential for impacts, and establishing management requirements for the avoidance and/or minimization of identified potential impacts.

Chemical Materials and Hazardous Materials/Waste

Potential impacts from chemical materials introduced into the environment from the Proposed Action and Alternative Actions will be assessed. The potential for chemical release from unexploded ordnance (UXO) will also be examined. Management requirements and minimization efforts will be presented. Analysis will identify potential Installation Restoration Program (IRP) and other contaminated sites within the project area and the potential for project activities to impact these areas. Management requirements are then established for avoidance and impact minimization.

Cultural Resources

Cultural resources are defined as archaeological areas and historical architectural properties. Potential impacts are identified if the Proposed Action extends into the boundaries of identified cultural resource areas, resulting in the disturbance of such resources. Analysis focuses on identifying potential cultural resource sites within or adjacent to the project area, evaluating the potential for impacts, and establishing management requirements for avoidance and impact minimization.

Socioeconomic Resources

It is important to review and evaluate the key socioeconomic factors and their complex interrelations with the economy in any environmental assessment. The socioeconomic interdependencies between Eglin AFB and the surrounding region increase the importance of cooperative planning, forecasting, and collaborative decision-making. This synergistic coordination and planning between Eglin AFB and the local communities minimizes impacts, reduces stress, and increases economic efficiencies. Potential impacts to the socioeconomic environment will be evaluated to ensure the commingling of these activities with the synergistic coordination and planning of Eglin with the local community.

Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, requires federal agencies to identify community issues of concern during the NEPA process, particularly those issues relating to decisions that may have an impact on low-income or minority populations.

Safety

Potential safety issues would be related to construction activities at the site of the Proposed Action. The contractor is responsible for ensuring that all contractor employees (and subcontractors) comply with all applicable Occupational Health and Safety Association (OSHA) standards. As a result, there would be no impacts to the safety of construction workers or other persons in the area of the Proposed Action during construction activities, and consequently safety of construction workers was not analyzed in this document. The Proposed Action site *does not* fall within the safety footprints of past or current mission activities. The site has not been evacuated in over 20 years for a mission and Eglin range safety (AAC/EMSP) does not envision this area being evacuated for any future missions (Monteith personal communication, 2004); therefore the safety of personnel manning the treatment facility will not be analyzed. Portions of the site may contain unexploded ordnance (UXO). Hazards from UXO will be analyzed (chemical materials potentially contained within UXO will be addressed in the Chemical Material section). Eglin and Hurlburt airfields are located approximately four miles from the Preferred Alternative site. Bird/Wildlife Aircraft Strike Hazard (BASH) impacts will be analyzed for safety impacts to the local airfields.

1.6 APPLICABLE REGULATORY REQUIREMENTS AND COORDINATION

Several Air Force and State permits are required for this action. Air Force permits and coordination requirements are:

- Air Force Form 103, 19940801 (EF-V3) Base Civil Engineering Work Clearance Request (Digging permit). As required by the Air Force, this permit would need to be obtained prior to project implementation. Within thirty days of digging permit application, all adjacent utility easement holders should be contacted so that they may identify the exact location of underground utility lines prior to digging.
- Hazmat Storage/Hazwaste Disposal Coordination. The Secretary of the Air Force must approve Okaloosa County's storage of hazardous materials and disposal of hazardous waste in accordance with 10 USC 2692.
- Air Force Materiel Command Approval for Real Estate Transactions. The real estate transaction for this project is being conducted in accordance with Air Force Instruction 32-9003, Granting Temporary Use of Air Force Real Property, which requires an Environmental Baseline Survey and review and approval at the Air Force Materiel Command level.

The WWTF will be permitted by the Florida Department of Environmental Protection (FDEP) through Okaloosa County. FDEP permits include:

- **Stormwater Facility Design and Construction Permit.** A National Pollutant Discharge Elimination System Permit (NPDES) Storm Water Facility Design and Construction Permit will be required due to the increase in impervious surface area created by the WWTF structures. Potential total area impacted by the WWTF and RIBS will be 255.51 acres.
- **Stormwater Permit for Construction Projects Disturbing One or More Acres.** A NPDES permit for construction activities disturbing one or more acres is also required for storm water management.

1.7 DOCUMENT ORGANIZATION

This environmental assessment follows the organization established by the Council of Environmental Quality (CEQ) regulations (40 CFR, Parts 1500-1508). This document consists of the following chapters:

- 1.0 Purpose and Need for Action
- 2.0 Description of the Proposed Action and Alternatives
- 3.0 Affected Environment
- 4.0 Environmental Consequences
- 5.0 Plans, Permits, and Management Requirements
- 6.0 List of Preparers
- 7.0 List of Contacts
- 8.0 References and Applicable Documents

Appendix A – Title V Applicability

Appendix B – WWTF and RIBS Process

Appendix C – Site Photos

Appendix D – Monitoring Data

Appendix E – Chemical Analysis

Appendix F – Public Review Process and Agency Coordination

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

As required by federal regulation, this Environmental Assessment (EA) addresses the possible environmental impacts of the Proposed Action, including a No Action Alternative. Section 2.5 provides a summary of the issues and potential impacts associated with the Proposed Action and no action.

2.1 PROPOSED ACTION (PREFERRED ALTERNATIVE)

The Proposed Action is for Okaloosa County to construct, operate, and maintain a new replacement wastewater treatment facility and associated Rapid Infiltration Basin System (RIBS) on 255.51 leased acres. A 25-year lease will be executed at the Air Force Level (Figure 1-1). The selection of this site as the Preferred Alternative is based on the following:

- The 255.51 leased acres provides sufficient room for:
 - a. 20 acre site for the 9.6 MGD wastewater treatment facility with liberal space for expansion.
 - b. 200 acre site for the rapid infiltration basins conservatively sized with lesser space for expansion.
 - c. 35 acres of existing lined holding ponds that can be used for emergency storage or as components of a possible future effluent reuse system.
- Piping is presently in place and central to the collection system.
- The geotechnology is optimal; there is adequate depth to groundwater and percolation for RIBS is favorable.
- There are no sensitive developments (schools, hospitals, churches or residential housing) within 3,000 feet of the site.
- The land is cleared. No deforestation will be required.
- Implementation will require no additional federal lands and approximately 421 acres will revert back to exclusive government control.
- The site provides adequate acreage to house both the WWTF and RIBS.

2.1.1 Wastewater Treatment Facility (WWTF)

It is the intent of Okaloosa County Water & Sewer, if granted approval, to construct a new 9.6 million gallon per day (MGD) Wastewater Treatment Facility on twenty acres of the existing spray irrigation field previously leased to Okaloosa County. This new facility will replace the existing 6.5 MGD plant that serves all of the unincorporated areas of Fort Walton Beach and several Eglin AFB housing areas. The 6.5 MGD plant is nearing its permitted capacity and life expectancy. After completion of the new facility, the 6.5 MGD plant will be dismantled and utilized as a master pumping station.

This new facility will be a Carrousel type process consisting of three 3.2 MGD poured-in-place concrete trains, settling basins (clarifiers) at end of each train, and ultraviolet disinfection channels, prior to final discharge to Rapid Infiltrations Basins (RIBs). Each train is approximately 300' long, 120' wide, and 15' deep, with the clarifiers being 120' diameter and 15' deep. The exact dimensions of the process path will not be determined until final design calculations and drawings are completed by the Engineer-of-Record. This process produces a high quality effluent and biologically reduces nitrogen to rates below 5 milligrams per liter. There will be two additional buildings, sizes to be determined at final design. One for office staff, laboratory testing and plant equipment storage and a second partially closed building for housing bio-solids dewatering process equipment. The anticipated life expectancy of the new structure is forty years. The whole process treats the wastewater to a high standard, with the possibility of providing re-claimed water to residential areas or to parts of Eglin AFB.

Ultraviolet (UV) Disinfection for Domestic Wastewater

UV irradiation is a non-chemical method of disinfection that would be implemented within the Proposed Action. Lamps at a wavelength of 254 nanometers (nm) kill viruses, bacteria, and protozoan, including *Giardia* and *Cryptosporidium*. Currently, the vast majority of domestic WWTFs in Florida, including the Garnier's WWTF, use chlorination for disinfection of effluent. The concerns associated with chlorination are covered in Chapter 4, but briefly include the production of hazardous by-products, toxicity to biota, and potential hazards to workers handling the chlorine at the facility. Recognizing the potential impacts from chlorination, Okaloosa County Water and Sewer has chosen to incorporate UV disinfection for the Proposed Action. This alternative method is highly encouraged by the State of Florida, Rule 62-600.440(1), Florida Administrative Code.

2.1.2 Rapid Infiltration Basin System (RIBS)

RIBS will consist of nine parcels covering approximately 130 acres (Figure 2-1). The parcels will be cleared of vegetation and graded to produce a three-foot berm around each parcel. The RIBS process allows for the treated wastewater effluent emitted from a central outflow pipe to percolate through the soil. The effluent travels through the soil matrix and undergoes further reduction in nitrogen and phosphorus levels as it drains to groundwater (Appendix B). Nitrogen removal averages are 50-80 percent when optimal hydraulic loading rates to maximize denitrification are followed. Phosphorus removals can range from 70-99 percent depending upon the physical and chemical properties of the soil (USEPA, 1981).

2.2 ACTION ALTERNATIVES

Table 2-1. Action Alternatives

Action	Location	Description
Proposed Action – Existing County Sprayfield	Existing sprayfield site on Eglin AFB	A new replacement treatment facility and RIBS would be constructed at the existing sprayfield site.
Alternative 1- Expansion at Garnier’s WWTP	Garnier’s WWTP on Essex Road in Fort Walton Beach	Expand and upgrade the existing Garnier’s WWTP. RIBS would not be incorporated.
Alternative 2 - North Beal Extension	North Beal Street in Fort Walton Beach	Construct a new replacement treatment facility at new site off of North Beal Street, which has been permitted as a Construction and Demolition Landfill. Effluent would be pumped to existing sprayfield site. RIBS would not be incorporated.
Alternative 3 – Hurlburt Field East Gate	Located off of Martin Luther King Blvd near Hurlburt Field East Gate	Construct a new replacement treatment facility at a new location near Hurlburt Field East Gate. RIBS would not be incorporated.
No-Action	No Location	Continue current operations.

Figures 2-1 through 2-4 show Action Alternative site locations.

2.3 NO ACTION ALTERNATIVE

The No Action Alternative would be to continue with current operations and not construct a replacement plant for the Okaloosa County WWTF. Achievement of full compliance with Florida State Statutes and FDEP rules by Okaloosa County Water and Sewer would not occur and resultant penalties would ensue.

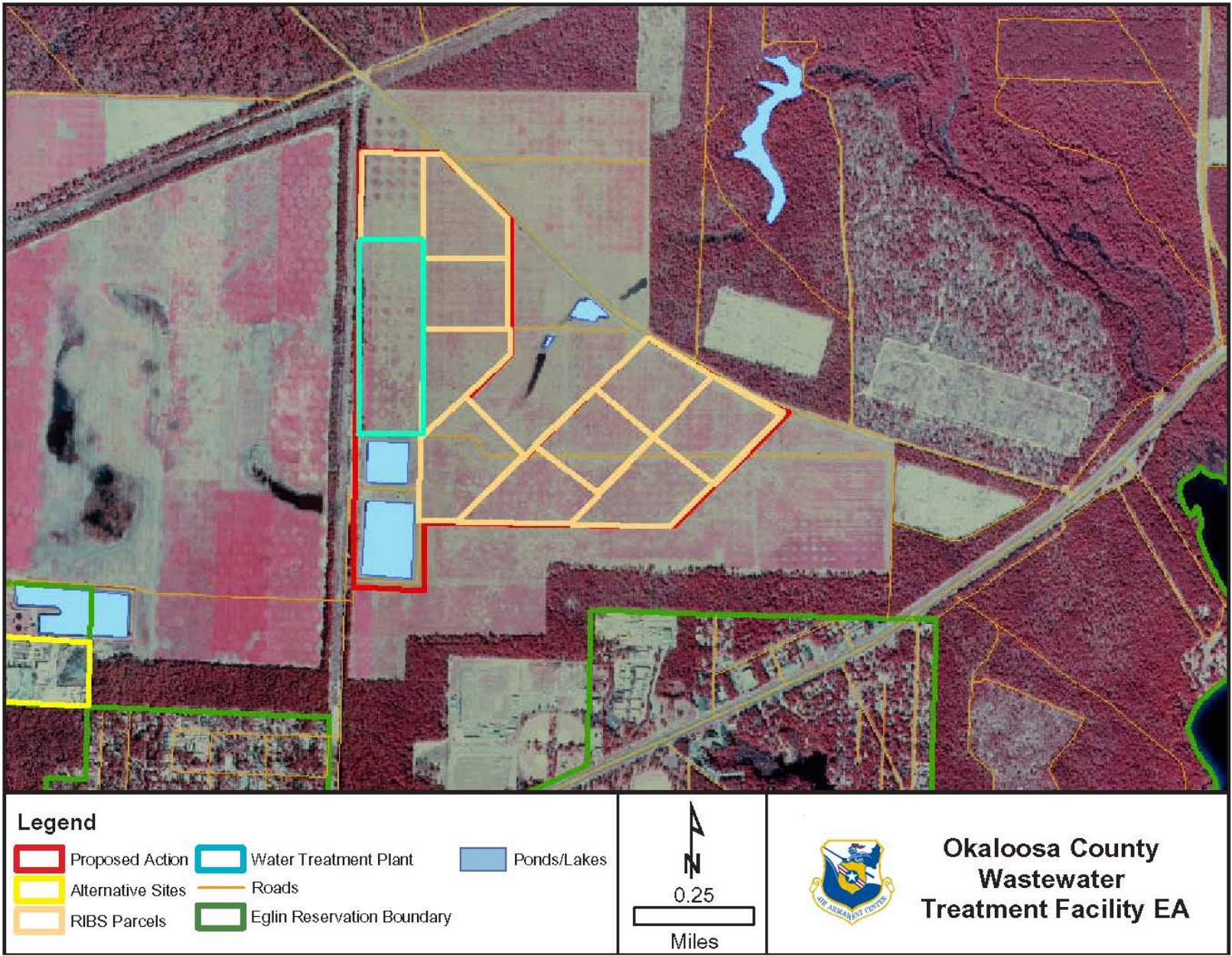


Figure 2-1. Proposed Action – Existing Sprayfield Site - Water Treatment Facility and RIBS Parcels



Figure 2-2. Alternative Action 1 – Garnier’s Wastewater Treatment Facility

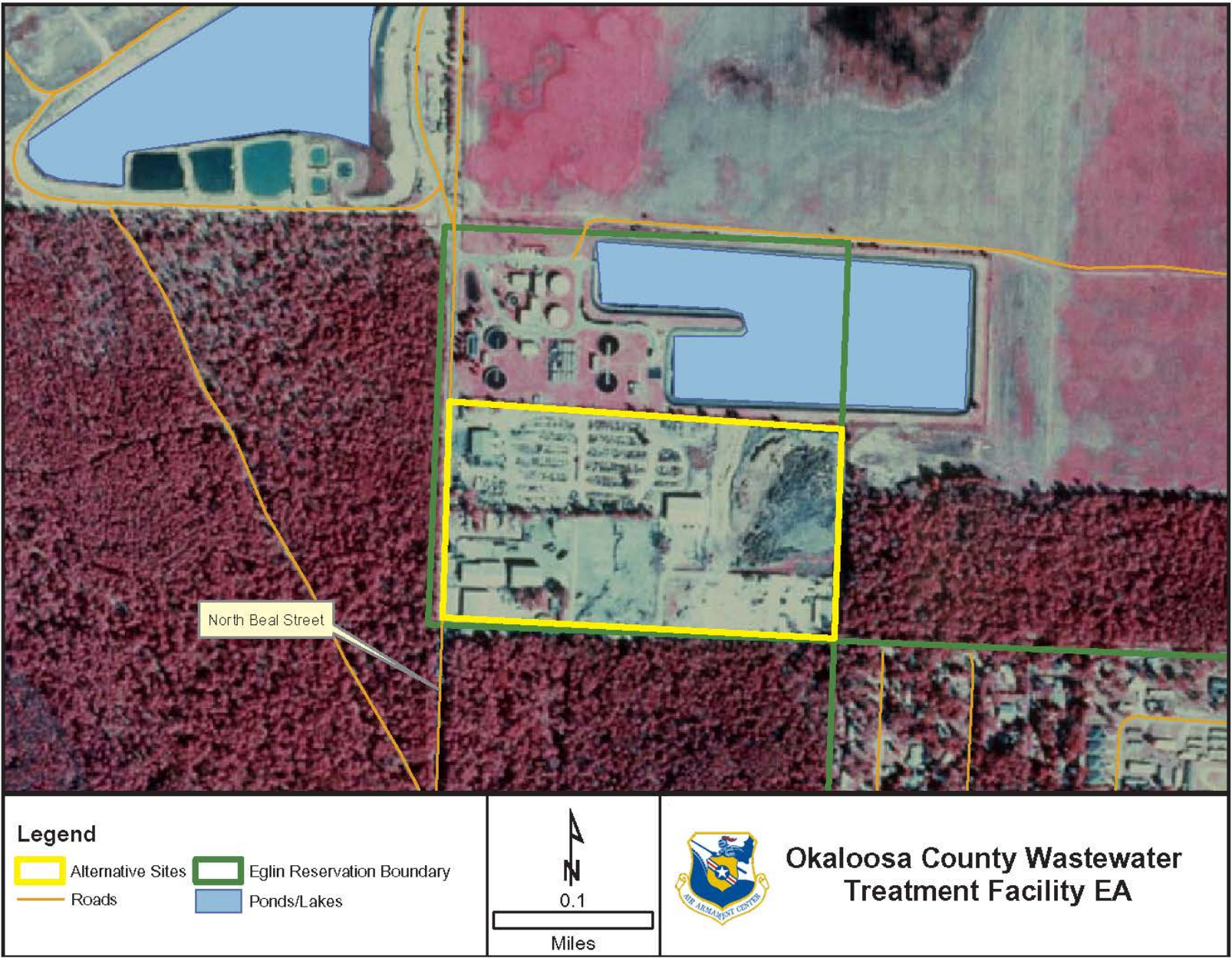


Figure 2-3. Alternative Action 2 – North Beal Extension Site

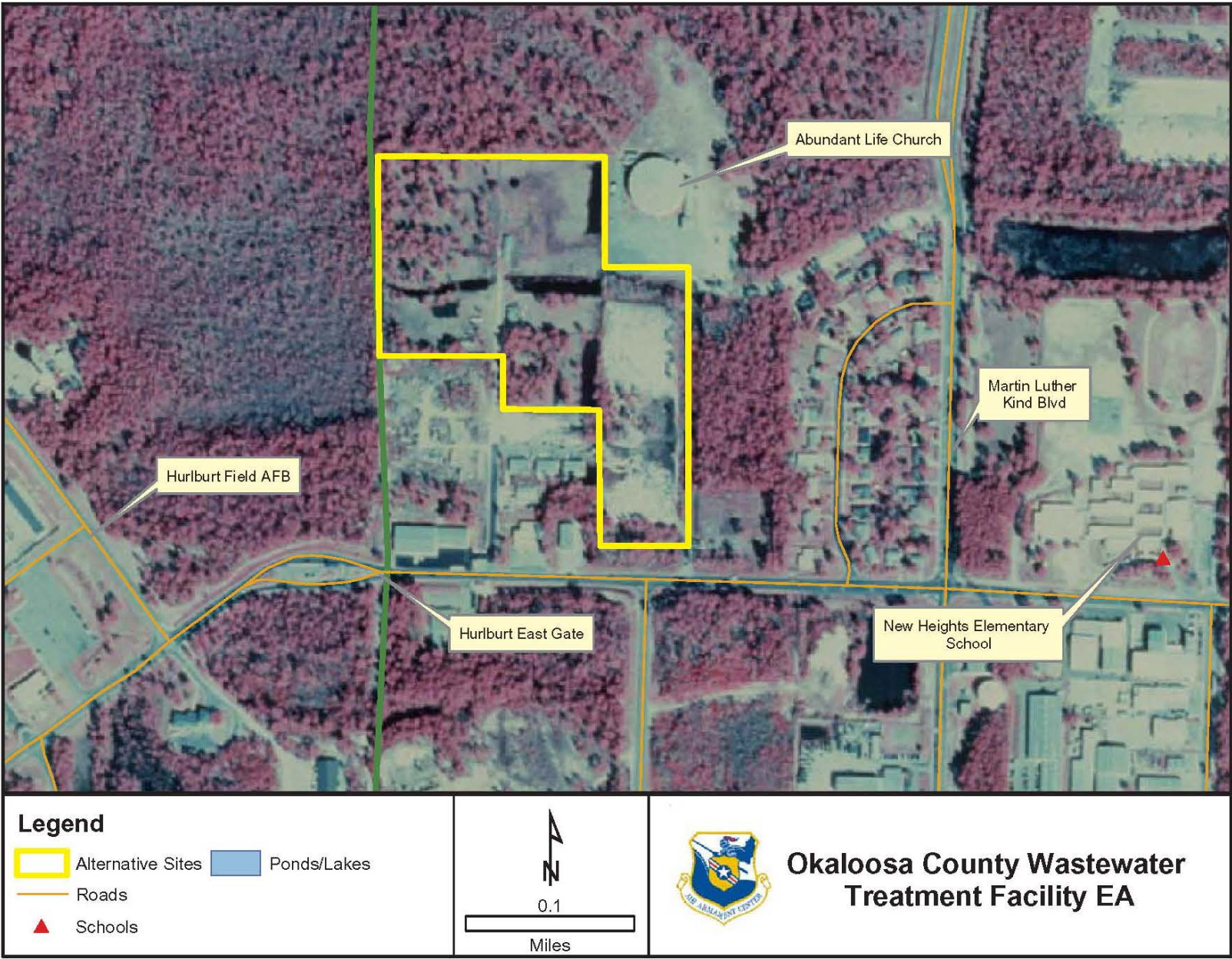


Figure 2-4. Hurlburt Field East Gate Site

2.4 COMPARISON OF ALTERNATIVES

Table 2-2. Summary Matrix of Issues, Proposed Action and Alternatives, and Potential Impacts

Issue	Proposed Action	Alternative 1 Garnier's WWTF	Alternative 2 North Beal Extension	Alternative 3 Hurlburt Field East Gate	No-Action
Air Quality	No adverse effects from construction activities or WWTF operation will occur.	Resultant construction activities would be at or below the levels (based on size of ground disturbance needed) used to estimate emissions for the Proposed Action. Operational capacity would be equal to or less than those used to estimate operation for the Proposed Action. No adverse impacts are anticipated.	Potential impacts for Alternative Action 2 are the same as Alternative Action 1.	Potential impacts for Alternative Action 3 are the same as Alternative Action 1.	No Impact
Noise	No adverse effects from construction noise are anticipated.	Residential areas would be exposed to noise that exceeds the 75-dBA (USEPA recommended) limit. From a noise standpoint, this alternative is least desirable.	In terms of noise, this alternative is comparable to the Proposed Action. No adverse impacts are anticipated.	Noise reaching a nearby church would not be significant on the weekends but could approach or exceed the 75-dBA limit during weekdays. This alternative presents a less desirable option than the Proposed Action.	No Impact
Land Use	Land use impacts from the Proposed Action are not anticipated.	An elementary school and residential housing area lie in close proximity to the property. Therefore, expansion and upgrade activities at the Garnier's WWTF may impact land use at this site.	It is not anticipated that impacts would result from construction of the facility at this location.	A church and residential housing area lie in close proximity to the property (~100 yards). Therefore, impacts from land use may occur.	No Impact.
Soils	Adverse impacts to soils from the Proposed Action are not probable given the use of BMPs.	The use of BMPs would minimize soil erosion. No adverse impacts are anticipated.	Based on current land use as a solid waste landfill and the implementation of BMPs to minimize soil erosion, adverse impacts are not expected at this site.	The site lies within a wetland area. BMPs should be used to minimize soil erosion and migration to wetland areas. Adverse impacts to soils are not anticipated if BMPs are followed.	No Impact
Water Quality	To provide a more accurate assessment of contaminant transport from effluent disposal an additional monitoring location south (down gradient to the direction of groundwater flow) of the proposed site is recommended.	Best management practices are required to prevent erosion from cleared land areas. Expansion of the WWTP would have no impacts on surface or ground water quality.	Construction of a WWTP at this location would require BMPs to prevent erosion from cleared land areas.	Surface waters and a cypress swamp area are located along the boundary of this site adjacent to the church and also through the interior portion of the site. BMPs are required to negate potential impacts from construction.	No Impact
Wetlands	According to GIS maps, a small wetland area exists along the eastern boundary of this site. However, there will be no construction within or near this area. Therefore, no impacts to this area are expected.	No wetlands would be disturbed at this location.	No wetlands are present at this alternative.	The small workable area of this alternative may make wetland disturbance difficult to avoid, depending on the exact placement of WWTP facilities. A Section 404 permit may be required for this location.	No Impact

Table 2-2. Summary Matrix of Issues, Proposed Action and Alternatives, and Potential Impacts Cont'd

Issue	Proposed Action	Alternative 1 Garnier's WWTF	Alternative 2 North Beal Extension	Alternative 3 Hurlburt Field East Gate	No-Action
Biological Resources	No impacts to sensitive ecological habitats are anticipated from the Proposed Action.	Given the highly disturbed condition of the site and surrounding area, expansion at this site would not adversely affect any sensitive species or ecological communities.	Given that the North Beal Extension site was permitted as a waste landfill, it is highly unlikely that construction of a wastewater treatment facility at this site would adversely affect any sensitive species or ecological communities.	Construction of a WWTF at this site would involve the clearance of approximately 10 acres of trees and could potentially impact wetlands. No impacts to any sensitive species are anticipated.	No Impact
Cultural Resources	An archeological survey conducted within the project area indicated that there were no cultural resources present. State Historical Preservation Officer consultation is not required because there are no resources impacted.	The expansion of Garnier's WWTF in Fort Walton Beach would not impact cultural resource areas.	The historic record does not reflect any important cultural resources at this site. Additionally, if resources did exist, past owners and operators, through their activities, have likely previously destroyed any cultural resources that may have existed.	The property near the Hurlburt Field East Gate is privately owned. No impacts to cultural resources are anticipated.	No Impact
Chemical Materials and Hazardous Materials/Waste	No adverse environmental impacts from hazardous/chemical materials are anticipated. An Environmental Baseline Survey (EBS) was conducted to assess potential contamination from a historical County Road Maintenance (CRM) facility (fuel storage tanks) and Mosquito Control District facility (pesticide storage). No contaminants of potential concern were identified in the site soils. A legacy bombing range (Range 4) was determined to exist on site. However, a site survey revealed that no unexploded ordnance (UXO) was present.	Discharge of treated effluent from the new facility would require an increase in sprayfield capacity. However, adverse impacts are not expected.	Potential impacts for Alternative Action 2 are the same as Alternative Action 1. Based on the current land use associated with the property, hazardous material issues are a concern at the site.	Potential impacts are the same as Alternative 1. From visual observation, there appear to be no hazardous materials on the property at the Hurlburt Field East Gate Site. Impacts are not anticipated.	No Impact
Socioeconomic Resources	There are no anticipated socioeconomic impacts associated with this Proposed Action.	There is potential socioeconomic impact to the residential housing and elementary school in terms of decreased land values (due to proximity to the expanded facility) and increased congestion in the area. Therefore, expansion and upgrade activities at the Garnier's WWTF (Alternative Action 1) may have socioeconomic consequences.	The site was a FDEP permitted Construction and Demolition Landfill. Thus, socioeconomic consequences are not anticipated.	There may be potential socioeconomic impacts to the residential housing and nearby church in terms of decreased land values (due to proximity to the expanded facility) and increased congestion in the area. Therefore, socioeconomic impacts may occur.	No treatment of additional waste would occur. Therefore, the County's ability to treat additional waste would be lost and socioeconomic impacts to the County may occur.

Table 2-2. Summary Matrix of Issues, Proposed Action and Alternatives, and Potential Impacts Cont'd

Issue	Proposed Action	Alternative 1 Garnier's WWTF	Alternative 2 North Beal Extension	Alternative 3 Hurlburt Field East Gate	No-Action
Environmental Justice	No potential impacts to the public, including low income or minority populations are anticipated. No environmental justice impacts are anticipated.	Both residential housing and an elementary school are near the facility. Communities of Comparison (COCs) are found adjacent to the site. If selected, this alternative would result in environmental justice impacts, therefore requiring mitigative measures.	Same as the Proposed Action	COCs surround the Hurlburt Field East Gate site. If selected, this alternative would result in environmental justice impacts, therefore requiring mitigative measures.	No Impact
Safety	<p>No impacts from UXO are associated with this proposed action. A legacy bombing range (Range 4) was determined to exist on site. However, a site survey revealed that no UXO was present.</p> <p>No impacts to safety would be associated with Bird Air Strike Hazards (BASH). The Federal Air Administration recommends a distance of five statute miles from approach or departure airspace for wildlife attractants that may cause hazardous wildlife movement. Although the distance of the treatment facility from the airfields are within five miles (Eglin 4.2 miles and Hurlburt – 3.75 miles, at the closest points) the plant is not within the approach/departure corridors of these airfields. BASH avoidance measures are required to be fulfilled by Okaloosa County. The requirements will be sufficient to protect both airfields. The FAA should be notified of the treatment plant and associated RIBs for approval.</p>	There are no UXO or BASH safety impacts associated with he expansion of Garnier's WWTF in Fort Walton Beach.	Same as Alternative 2; no impact.	There is no UXO associated with this site. Same as Alternative 1 regarding BASH; no impact.	No impact.

2.5 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

Two additional sites were considered for the Proposed Action. However, due to limitations described below, these sites were not carried forward.

- (1) Construction of a replacement plant at a new site located off North Beal Extension was considered. However, based on the following information, the site was not carried forward:
 - The property, consisting of ~20 acres, would have to be acquired from the Air Force.
 - The land is wooded and undisturbed. Recommendations from the Air Force were given to pursue developed properties.
- (2) Construction of a replacement plant at the Okaloosa Fairgrounds was considered but was not carried forward based on the following:
 - The U.S. Forest Service (USFS) owns the property and OCWS would need to purchase additional property to provide as a land exchange with the USFS.
 - There is no ready access to the property.
 - It lies in close proximity to the public.
 - Tentative discussions on future housing in the area have occurred. New housing at the site would result in incompatible land use.
 - The property is not large enough to build the water treatment facility and RIBS.

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3. AFFECTED ENVIRONMENT

3.1 NOISE

Noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. It may be intermittent or continuous, steady or impulsive, stationary or transient. Stationary noise sources are normally related to specific land uses, such as housing tracts or industrial plants. Transient noise sources move through the environment, either along established paths (e.g., highways and railroads), or randomly (e.g., a bulldozer operating in a large field). There is wide diversity in responses to noise that not only vary according to the type of noise and the characteristics of the sound source, but also according to the sensitivity and expectations of the receptor, the time of day, and the distance between the sound source and the receptor.

Definition of Resource

The physical characteristics of noise, or sound, include its intensity, frequency, and duration. Sound is created by acoustic energy, which produces minute pressure waves that travel through a medium, like air, and are sensed by the eardrum. As the acoustic energy increases, the intensity or amplitude of the pressure waves increase, and the ear senses louder noise. Sound intensity varies widely and is measured on a logarithmic scale to accommodate this wide range. The logarithm, and its use, is nothing more than a mathematical tool that simplifies dealing with very large and very small numbers. For example, the logarithm of the number 1,000,000 is 6, and the logarithm of the number 0.000001 is -6 (minus 6). As more zeros are added before or after the decimal point, converting these numbers to their logarithms greatly simplifies calculations that use these numbers. Logarithmically, sound levels are described in terms of decibels (dB). Zero dB is the threshold of hearing; normal human speech ranges from 60 – 65 dB; approximately 140 dB is the threshold of pain. It should also be noted that an approximate doubling in absolute sound energy is reflected as an increase of 3 dB. However, for the average person to sense a doubling in sound, a 10-dB increase in noise level is normally required (USEPA, 1974).

The frequency of sound is measured in cycles per second, or hertz (Hz). This measurement reflects the number of times per second the air vibrates from the acoustic energy. Thunder is a low frequency sound, while whistles are a high frequency sound. Sound measurement is further refined through the use of weighting scales. The normal human ear can detect sounds that range in frequency from about 20 Hz to 15,000 Hz. However, all sounds throughout this frequency range are not heard equally well. Therefore, through internal electronic circuitry, some sound meters are calibrated to emphasize frequencies in the 1,000 to 4,000 Hz range. The human ear is most sensitive to frequencies in this range, and sounds measured with these instruments are termed “A-weighted.”

The duration of noise events and the number of times they occur are also important considerations in assessing noise impacts. Based on measurements of individual noise events, average sound levels over extended periods of time can be calculated. In assessing noise associated with the proposed construction projects, several metrics are considered.

The term “metric” describes a standard of measurement. As used in environmental noise analyses, there are many different types of noise metrics. Each has a different meaning or interpretation, and each was developed to represent the effects of environmental noise. The primary noise metrics considered in this EA are the maximum sound level (L_{\max}), the Sound Exposure Level (SEL), and the equivalent sound level (L_{eq}). Each metric represents a “tier” for quantifying the noise environment. In this EA, all noise level metrics are A-weighted, and are expressed in terms of A-weighted decibels. The assessment of noise impacts will focus on average noise levels, specifically L_{eq} .

L_{\max} represents the first tier in quantifying the noise environment. It is the highest instantaneous sound level measured during a noise event. For a receptor, noise levels start at ambient, background noise levels, rise up to a maximum level as the event occurs (like a motorcycle moving down a street), and then return to background levels as the noise source moves away from the receptor.

SEL, the second tier, combines the maximum sound level associated with the noise event and the duration of the event. L_{\max} alone may not represent how intrusive a noise event may be because it does not consider the length of time the noise event persists. SEL combines both of these characteristics into a single metric. It is important to note, however, that SEL does not directly represent the sound level heard at any one time, but rather provides a measure of the total acoustic exposure associated with the entire event, and normalizes it into a one-second duration. Therefore, for noise events that last longer than one second, the SEL level, in dB, will be greater than the L_{\max} level, in dB. SEL values are also important because that metric forms the basis for the calculation of average sound levels over periods of time.

Although the first and second tiers (L_{\max} and SEL) provide a description of a specific noise event, neither describes in a single metric the impact of multiple exposures to elevated noise events. The third tier, which may be used to estimate overall noise impacts, is the equivalent sound level (L_{eq}). This metric represents the sum of the individual noise events and the average of the resulting noise level over a specified period of time. Thus, it is a composite metric that includes the maximum noise level associated with each discrete event, the duration of each discrete event, and the number of discrete events that occur. The noise assessment in this EA uses time-averaged metrics.

Existing Conditions

Existing conditions at the proposed site are characterized by aircraft over flights and distant traffic noise. Bulldozers and other heavy machinery may be a frequent part of the noise environment at the North Beal Extension site (Alternative 2) where a landfill is currently in operation. The Hurlburt Field East Gate area is relatively quiet as the wooded areas provide some dampening effect on nearby everyday noise sources such as traffic from Lovejoy Road and Martin Luther King Boulevard. All areas under consideration experience some noise from military aircraft. Ambient noise measurements for the Proposed Action and alternative locations were not available, but daytime outdoor ambient noise levels for a typical urban/suburban setting can range from 40 dBA to 75 dBA.

3.2 LAND USE

Eglin AFB

Eglin AFB is located on the Florida Panhandle between Pensacola and Panama City. It is bordered on the south by the Gulf of Mexico. Eglin AFB is comprised of more than 724 square miles of land ranges and facilities and more than 86,500 square miles of water ranges in the Gulf of Mexico. Eglin Main Base is located in the southwestern portion of Eglin AFB in Okaloosa County, Florida. It is approximately 0.8 miles and 1.5 miles southwest of Valparaiso and Niceville, Florida, respectively, and 4 miles northeast of Fort Walton Beach, Florida. U.S. Highway 85 and State Route 123 converge at Eglin Main. Eglin Main Base hosts the main testing, administrative, and living facilities, along with the major airfield, and is home to Air Armament Center, a unit of the Air Force Materiel Command.

Eglin AFB supports approximately 50 associate units, including the 33rd Fighter Wing, Air Force Reserve (Duke Field), Air Force Special Operations Command (Hurlburt Field), Air Force Space Command (Space Surveillance), U.S. Army Ranger Camp, U.S. Navy (Naval Explosive Ordnance Disposal School and Choctaw Field), Federal Bureau of Investigation, and federal and Okaloosa County Prisons. The Eglin land reservation consists of 27 ranges and 10 auxiliary fields of which three remain active: Eglin Main, Duke Field and Hurlburt Field.

Proposed Action Existing County Sprayfield

The existing sprayfield is located on Roberts Road off of Lewis Turner Boulevard (Figure 2-1). The sprayfield site is currently permitted to accept treatment loads of up to 6.5 MGD from the WWTF for spraying. The Proposed Action would allow the construction of a new WWTF and RIBS to encompass 255.51 acres.

Historically, a portion of the sprayfield (Range 4) was used for air-to-ground gunnery and rocket training from the 1940s to the 1950s. Prior to the construction of the sprayfield the site contained a mosquito spray shop and vehicle maintenance area. Currently, a galvanized building exists on the property that allows for the storage of tractors and new equipment. Two holding ponds are located south of the storage building (Figure 2-1, Appendix C). A portion of the site is used for cattle grazing.

Alternative 1 - Garnier's Wastewater Treatment Facility

The Garnier's Wastewater Treatment Facility is located on Essex Road off of Racetrack Road in Fort Walton Beach, Florida (Figure 2-2). The facility has undergone upgrades and expansions since the initial construction in 1971. In 1995 the permitted capacity was increased to 6.5 MGD. The facility is surrounded by development to include Ocean City Elementary School and residential housing, both of which are located within ~200 yards of the facility (site photos - Appendix C).

Alternative 2 - North Beal Extension

The property at the North Beal Extension encompasses just over 21 acres and is located on North Beal Street in Fort Walton Beach (Figure 2-3). It was permitted as a Construction and Demolition Debris Solid Waste Landfill. The landfill has been closed by the owner; however,

not in accordance with FDEP rules. Currently, there is ongoing administrative enforcement action for closure (Mitchell, personal communication, 2003). Several buildings and multiple waste piles, some in excess of 20 feet, are located on the property (site photos - Appendix C).

Alternative 3 - Hurlburt Field East Gate

Property located near the Hurlburt Field East Gate encompasses 17 acres and extends from the east to the north of Martin Luther King Boulevard and the gate (Figure 2-4). The site is partially wooded and contains a wetland area. The site lies adjacent to the Abundant Life Church, residential housing, and forested areas (Appendix C). The property is privately owned.

3.3 PHYSICAL RESOURCES

3.3.1 Air Quality

As noted earlier, Eglin AFB is located in AQCR 5. The USEPA has classified this AQCR as attainment for all criteria pollutants. Although mission activities at Eglin result in diverse sources and emission rates, the regional air quality is good, attaining both federal and state standards. The input of air emissions from land areas within Santa Rosa, Okaloosa, Walton, Escambia, and Gulf counties is small due to the lack of heavy industry. Air pollutants are emitted from mobile and stationary sources such as general maintenance activities, government and privately owned vehicles, jet engine testing, aircraft operations, prescribed burning, wildfires, mission test and training operations, and the open burning/open detonation of unexploded ordnance (EPA, 1998). Table 3-1 summarizes the air emissions for Okaloosa County, provided by Florida Department of Protection for the year 2000. The current wastewater treatment facility is not required to report air emissions (Crews, 2003).

Table 3-1. Total Air Emissions for Okaloosa County

Emissions (tons/year)					
	CO	NO _x	PM ₁₀	SO _x	VOC
Okaloosa County	91,359.85	8,709.06	3,756.45	405.48	11,957.66

Meteorology

The climate in the Eglin area is best characterized as humid and subtropical, with long, warm summers and relatively mild winters. Conditions are affected by the Gulf of Mexico, which tends to moderate temperature extremes. The annual temperature averages about 76° Fahrenheit (F) over a normal year, ranging from an average of about 80° F during the summer to around 64° F during the winter (U.S. Air Force, 1996). The prevailing wind direction in the Eglin area is from the north, with wind directions from the south and south-southwest in the early summer months. The mean prevailing wind speed ranges from 6.9 to 9.2 miles per hour in the first half of the year and 4.6 to 8.0 in the last half of the year. Hurricane season runs from June 1 through November 30. These intense tropical weather systems contain strong thunderstorms with maximum sustained winds of 74 mph or higher. Tropical storms may develop during hurricane season and are organized systems of strong thunderstorms and maximum sustained winds of 39- 73 mph.

Annual rainfall at the Main Base averages about 65 inches per year, based on 70 years of record keeping for the City of Niceville, Florida. More than 40 percent of this annual amount occurs during the summer months of June through September, mainly in the form of convective thunderstorms. These storms are typically intense, widely scattered, and relatively brief. July usually receives the highest rainfall during the summer period (U.S. Air Force, 1996).

Most of the remaining annual rainfall is from winter rains resulting from frontal systems that frequently pass from west to east through the region. December and January are usually the highest winter rainfall months, with monthly totals similar to the month of July. Extended periods of dry weather can occur in any period, but are most common during the spring and fall months (U.S. Air Force, 1996).

3.3.2 Soils

Lakeland Association

Soil formation is an on-going process that is determined by the nature of the parent material and influence of environmental factors such as climate, geology, topography, and vegetation. Soils at the existing sprayfield (Preferred Action) and North Beal Extension (Alternative 2) site belong to the Lakeland Association and are primarily excessively drained, brownish-yellow sands that have developed along the broad ridge and tops and slopes. Typically, they have sandy surface layers with sandy subsoils that are more than 80 inches deep.

Overall, the majority of Lakeland association soils are well-drained, sandy, and low in organic matter content and cation exchange capacity (CEC). Soil pH values range from 4.5 to 6.0 and contain less than one percent organic matter in the top 0 to 40 inches of soil. Reported CEC values for the top six inches of Lakeland soils were variable (3.5 to 17 meq/100 gms soil) and likely reflect variability in sampling sites (e.g., amount of surface organic matter, disturbed versus undisturbed surface). Permeability ratings are moderate to very rapid (6.0 to 20 inches per hour) for Lakeland soils (U.S. Department of Agriculture, 1995). Rainfall and runoff investigations at Eglin showed that due to the high permeability of Eglin soils, rainfall sequences were required before overland flow and runoff occurred (Becker et al., 1994). Lakeland soils have a bulk or particle density of 1.48 grams per cubic centimeter (g/cm^3) (U.S. Department of Agriculture, 1995).

The Lakeland soils are easily eroded because they lack cohesiveness and have limited water-holding capacity. The establishment and maintenance of vegetation is difficult because the soils are too sandy, low in productivity, or are on steep slopes (U.S. Air Force, 1996).

Rutlege Sand

The proposed project area near the Hurlburt Field East Gate (Alternative 3) is comprised of Rutlege Sand (USDA, 1995). Rutlege Sand is a very poorly drained, nearly level soil that lies in depressional areas, such as ponds, bays or sinks, on flood plains along streams and creeks, or on upland flats.

The surface layer of the Rutlege soil is black sand approximately eight inches thick. The subsurface layer is dark gray sand about five inches thick. The underlying material to a depth of

80 inches or more is sand. The soil has a water table at or near the surface for extended periods during the year. Ponding, as well as flooding (in floodplains) is common. The available water capacity is high in the subsurface layer and low in the substratum. Permeability is rapid throughout; however, drainage is slow due to the high water table (USDA, 1995).

According to the National Cooperative Soil Survey (USDA, 1995), “This soil has severe limitations affecting sites used for urban or recreational development, mainly because of the wetness and ponding. Installing a drainage system and adding large amounts of fill material are necessary to make soil suitable for these uses.”

Urban Land

The Garnier’s WWTF (Alternative 1) has been designated as Urban Land (USDA, 1995). The soil type is undefined and is a mixture of several varieties brought in for construction processes. A large majority of Urban Land is covered with asphalt or concrete.

3.3.3 Water and Wetland Resources

Water resources and wetlands, components of the affected environment for some of the sites of the Proposed Action, are identified in this section.

Regulatory Overview

Water resources are protected by a number of federal and state water quality acts, a floodplain management directive, and implementing regulations. With respect to the Proposed Action, major regulations include:

- Clean Water Act
- Executive Order 11988, Floodplain Management (implemented for the Air Force as part of Air Force Instruction 32-7060)
- Air Force Instruction (AFI) 32-7041, Water Quality Compliance

The Florida Department of Environmental Protection (FDEP) is responsible for implementing regulations for the Safe Drinking Water and Clean Water Acts. On Eglin Air Force Base (AFB), AFI 32-7041 instructs the Air Force on how to assess, attain, and sustain compliance with the Clean Water Act; other federal, state, and local environmental regulations; and related Department of Defense (DoD) and Air Force water quality directives. Any actions being considered by federal agencies must be evaluated to determine whether they would occur within a floodplain (Executive Order 11988, Floodplain Management). Floodplains that must be considered include those areas that have a one percent or greater probability of being flooded in a given year (also known as a 100-year floodplain). In part, Executive Order 11988 stipulates that federal agencies proposing actions in floodplains consider alternative actions to avoid adverse effects (e.g., destruction of the floodplains); avoid incompatible development in the floodplains; provide opportunity for early public review of any plans or proposals; and, if adverse effects are unavoidable, include mitigation measures in the action to minimize the impacts.

Executive Order (EO) 11988, Floodplain Management (1977, 42 Fed. Reg. 26951), requires federal agencies to avoid adverse impacts associated with the occupancy and modification of floodplains and to avoid floodplain development whenever possible. Additionally, EO 11988 requires federal agencies to make every effort to reduce the risk of flood loss, minimize the impact of floods on human health, safety, and welfare, and preserve the natural beneficial value of floodplains.

Additionally, EO 11990, Protection of Wetlands (24 May 1977, 42 Fed. Reg. 26961), places additional requirements on floodplains when considered as wetlands in the EO. It requires federal agencies to avoid undertaking or providing assistance for new construction located in wetlands unless there are no practicable alternatives and all practicable measures to minimize harm to wetlands have been implemented. It also precludes federal entities from leasing space in wetland areas unless there are no practicable alternatives.

Parts of the floodplain that are also considered wetlands will, in addition to floodplain zonings, receive protection from federal, state, and local wetland laws. These laws, such as the U.S. Army Corps of Engineers section 404 Permit Program, regulate alterations to wetlands to preserve both the amount and integrity of the nation's remaining wetland resources.

Eglin AFB has an existing National Pollutant Discharge Elimination System (NPDES) permit for industrial discharge of storm water, but construction activities greater than one acre in scope that may potentially create erosion would require an additional NPDES construction permit. A WWTF would also require a permit for construction of new storm water facilities in accordance with FAC 62-25.

Surface Water

Potentially affected surface waters of the Proposed Action and alternatives include waters, streams or ponds that may be directly affected during the construction phase of the project, or that may receive runoff from impervious surfaces once construction is complete. In the event of a break or leak such that sewage effluent escaped untreated from the facility, potentially affected surface waters would be those within and downgradient of the watershed basin. Timber Lake is located near the Proposed Action and an existing pond is located on the Hurlburt Field East Gate site (Alternative 3). Impact to these water bodies is not anticipated and is discussed in Chapter 4.

Surface Water Quality

Presently water quality within the FDEP watershed basins surrounding Eglin AFB is rated as "good" meaning those waters fully meet the use for which they have been classified, including the sub-basins that encompass the Proposed Action and alternatives. Overall water quality within the Eglin region is improving though insufficient data was available for some areas of Eglin during the last FDEP assessment.

The FDEP, Bureau of Surface Water Management, utilizes an extensive water quality database known as STORET to compile the quality of surface waters in Florida. This database is generated by various governmental agencies throughout Florida and across the country (FDEP, 1999). Also included were other reports, databases, and special studies conducted by universities and private organizations. The results of this study are presented in *the Florida Water Quality Assessment*,

2000 305 (b) Report (FDEP, 2000). A scoring system based on these data is used by FDEP to rate the quality of surface waters of the state. Florida surface waters were rated as follows:

- Fully Meets Use
- Partially Meets Use
- Does Not Meet Use
- Insufficient Data

Pollutants may enter surface waters by either washing off the surface during heavy rains or by percolating through the sandy soils of into the groundwater. Once in the groundwater, pollutants can migrate laterally and enter the surface waters through the base flow, which provides most of the water to area streams and creeks. Lateral migration can occur at the water table or at the discontinuous clay layers common in area soils above or within the water table. Once these pollutants enter the surface waters, they can affect the quality of the vegetation and wildlife habitat that these streams provide.

Existing Conditions

Water quality data from the nearest surface water body, Timber Lake, is acceptable by FDEP surface water quality standards (Appendix D).

Groundwater

There are two significant aquifers at Eglin AFB and the surrounding area: the Surficial Aquifer, also known as the Sand and Gravel Aquifer, and the Floridan Aquifer. The Sand and Gravel Aquifer is a generally unconfined, near-surface unit segregated from the underlying limestone Floridan Aquifer by the low-permeability Pensacola Clay confining bed.

Sand and Gravel Aquifer

The thickness of the Sand and Gravel Aquifer in the region of influence (ROI) ranges from 25 to 300 feet. The aquifer is composed of clean, fine-to-coarse sand and gravel but locally contains silt, silty clay, and peat beds. In the vicinity of Fort Walton Beach, the aquifer consists of several distinct sandy units, the lowest of which is the main producing zone. Yields from wells within this zone vary considerably but are generally in the range of 200-400 gallons per minute (U.S. Army Corps of Engineers, 1994).

On the installation, some of the range area wells draw relatively small amounts of water from this aquifer for operational uses. The Sand and Gravel Aquifer has been identified as an important source of water for Escambia, Okaloosa, and Santa Rosa counties. It is used primarily for irrigation in Okaloosa and Walton counties (FDEP, 2000).

Water quality of the Sand and Gravel Aquifer is good, being very soft and relatively demineralized. Raw water from the aquifer has a pH ranging from 3.0 to 10.2, although it is usually acidic. Its average pH is 4.9 in the upper zone and 7.2 in the lower (production) zone. The nitrate average for the upper zone is 0.81 milligram per liter (mg/L) and 0.11 mg/L for the

lower zone. Iron content of the aquifer ranges from 0.07 mg/L to 95 mg/L with a median of 2.05 mg/L (Maddox et al., 1992).

Existing Conditions - Monitoring Well Water Quality

Shallow monitoring wells are located at existing sprayfield. Only two of eleven wells are located within the proposed action site. All monitoring wells are locked with special well caps (Helms, 2004). Water quality data is collected from the eleven wells, which are dispersed throughout the sprayfield property. Parameters monitored include chromium, lead, fecal coliform, pH, sulfate, nitrate, total dissolved solids, arsenic, cadmium and chloride. Water level is also measured periodically at each well. A comparison of quarterly data for each well and water quality standards against which the data is measured is provided in Appendix D. None of the parameters exceed FDEP standards, though nitrates have approached the standard of 10mg/L at some well locations. Wells located more to the north and west exhibit better water quality, whereas wells located south and east on the property tend to have higher nitrates, dissolved solids and metals.

Wells will remain in operation for a period of time determined by FDEP permitting engineers (Helms, 2004a). FDEP Compliance and Enforcement has placed Okaloosa County as the responsible party for the groundwater over the period of time it would take for the groundwater to reach the furthest point away from the site (Helms, 2004a). Okaloosa County estimates that groundwater monitoring wells would remain active for at least two to three years (Helms, 2004a). Once it has been determined that the monitoring wells can be closed, they will be closed in accordance with Northwest Florida Water Management District (NFWFMD) requirements which stipulate that closure will be performed by a licensed well contractor. Closure will be guided by the rules set forth in Chapter 40A-3 of the Florida Administrative Code (FAC).

Floridan Aquifer

The Floridan Aquifer, which occurs beneath most of the state of Florida, consists of a thick sequence of interbedded limestones and dolomites overlain by the Pensacola Clay confining bed. The Bucatunna Formation confining bed separates the Floridan Aquifer into upper and lower limestone units. The lower limestone unit is saline and is not used as a water source.

The upper limestone of the Floridan Aquifer is the principal source of water used at Eglin AFB and in the surrounding communities.

Eglin AFB has over 43 permitted wells that use the Floridan Aquifer waters. These wells are required to be sampled on a regular basis as part of their operating permit. Water from these wells is sampled for all state and federal primary and secondary drinking water standards. All operating production wells currently meet drinking water standards set by the state.

Yields from wells are large, ordinarily in the range of 250 to more than 1,000 gallons per minute, and the water is found under confined conditions throughout the Eglin AFB area (USGS, 2002).

Wetlands

Wetlands are defined in the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (U.S. Army Corps of Engineers, 1987). All jurisdictional wetlands in the United States meet three wetland delineation criteria (hydrophytic vegetation, hydric soils, and wetland hydrology) and are protected under Section 404 of the Clean Water Act (33 United States Code Section 1344) and its implementing regulations found in 40 Code of Federal Regulations 230. Wetlands on federal lands are further protected under Executive Order (EO) 11990, which states "...each federal agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands...."

The Florida Department of Environmental Protection (FDEP) has a permitting program called the Environmental Resource Permit under Part IV, Florida Statutes Section 373, which includes wetlands regulations. Florida's wetland program regulates dredge and fill activities in both fresh and salt waters under their jurisdiction. Waters adjoining Florida's coastline are also under the state's jurisdiction. Permit applications made to the FDEP can also serve as joint applications to initiate concurrent review by the USACE.

The USACE and FDEP both have a formal process for determining a jurisdictional wetland. This delineation process should be accomplished in coordination with AAC/EMCE, AAC/EMSN and the proponent or his contractor.

If no practicable alternative to the Proposed Action exists, mitigation measures may be necessary to minimize impacts. In order for the project to proceed, the Deputy Assistant Secretary for Environment, Safety and Occupational Health, must be notified in accordance with Executive Order 11990. Additionally, an environmental assessment or a finding of no practicable alternatives report must be prepared and public notice of intent must be made before proceeding with USACE consultation.

At this point, informal consultation with the USACE is recommended to determine if the project impacting wetlands qualifies under any nationwide permits. If the project qualifies, the state may require additional paperwork to be filed with the FDEP. If the project does not qualify under the nationwide permit, USACE and FDEP consultation under Section 404 of the Clean Water Act will be required to complete the necessary joint-permit process. If the project is approved, the action will likely include mitigation such as site replacement of wetlands at a ratio determined by the USACE and the FDEP, re-creation of wetlands elsewhere on the site, or purchase and fencing of wetlands off site, and monitoring (until wetlands become established) of replacement wetlands.

The following categories of wetland and riparian ecological associations are found on Eglin AFB: 1) wetlands that are dominated by plants adapted to anaerobic (no oxygen) substrate conditions due to saturation or inundation for more than 10 percent of the growing season, 2) lacustrine wetlands that occur in natural depressions, and 3) riverine communities that are natural, flowing waters and are bounded by channel banks (U.S. Air Force, 2002). The above categories are further broken down into natural community types, which include wet flatlands, floodplain wetlands, basin wetlands, and riparian zones. Wetlands play a number of functional roles, including the maintenance of regional biodiversity, floodwater storage, and water quality

through filtering of pollutants. Wetlands are also important food sources for many animals, including wood storks, raccoons, and opossum.

Existing Conditions

Wetland areas are present near the Hurlburt Field East Gate alternative (Figure 3-1).

Floodplains

Floodplains are lowland areas adjacent to surface water bodies (i.e., lakes, wetlands, and rivers) that are periodically covered by water during flooding events. Some floodplains and riparian habitat are highly diverse, often containing a rich assemblage of aquatic and terrestrial species. Floodplain vegetation and soils act as water filters, intercepting surface water runoff before it reaches lakes, streams, or rivers.

This process aids in the removal of excess nutrients, pollutants, and sediment from the water and helps reduce the need for costly cleanups and sediment removal. Floodplains also reduce downstream flooding by increasing upstream storage in wetlands, sloughs, back channels, side channels and former channels.

The 100-year floodplain is considered a Wetland Resource Area under the Wetlands Protection Act. Executive Order (EO) 11988, Floodplain Management (1977, 42 FR 26951), requires federal agencies to avoid adverse impacts associated with the occupancy and modification of floodplains and to avoid floodplain development whenever possible. EO 11988 also requires federal agencies to make every effort to reduce the risk of flood loss, minimize the impact of floods on human health, safety, and welfare, and preserve the natural beneficial value of floodplains.

Additionally, EO 11990, Protection of Wetlands (24 May 1977, 42 FR 26961), places additional requirements on floodplains when considered as wetlands in the EO, which requires federal agencies to avoid undertaking or providing assistance for new construction located in wetlands unless there are no practicable alternatives and all practicable measures to minimize harm to wetlands have been implemented. It precludes federal entities from leasing space in wetland areas unless there are no practicable alternatives.

Parts of the floodplain that are also considered wetlands will, in addition to floodplain zonings, receive protection from federal, state, and local wetland laws. These laws, such as Section 404 of the Clean Water Act, as implemented by the U.S. Army Corps of Engineers Section 404 permitting program, regulate alterations to wetlands to preserve both the amount and integrity of the nation's remaining wetland resources. According to Federal Emergency Management Agency (FEMA) flood zone designations, all of the alternative sites are within Zone X, which means they are not considered to be in Special Flood Hazard Areas (Figure 3-2).

3.3.4 Ecological Associations

Eglin has seven major ecological associations. The Sandhills or forested areas, Open Grassland/Shrubland (as represented by cleared areas), and Wetlands/Riparian ecological associations are found within the Proposed Action site and alternative sites shown in Figures 3-3 and 3-4.

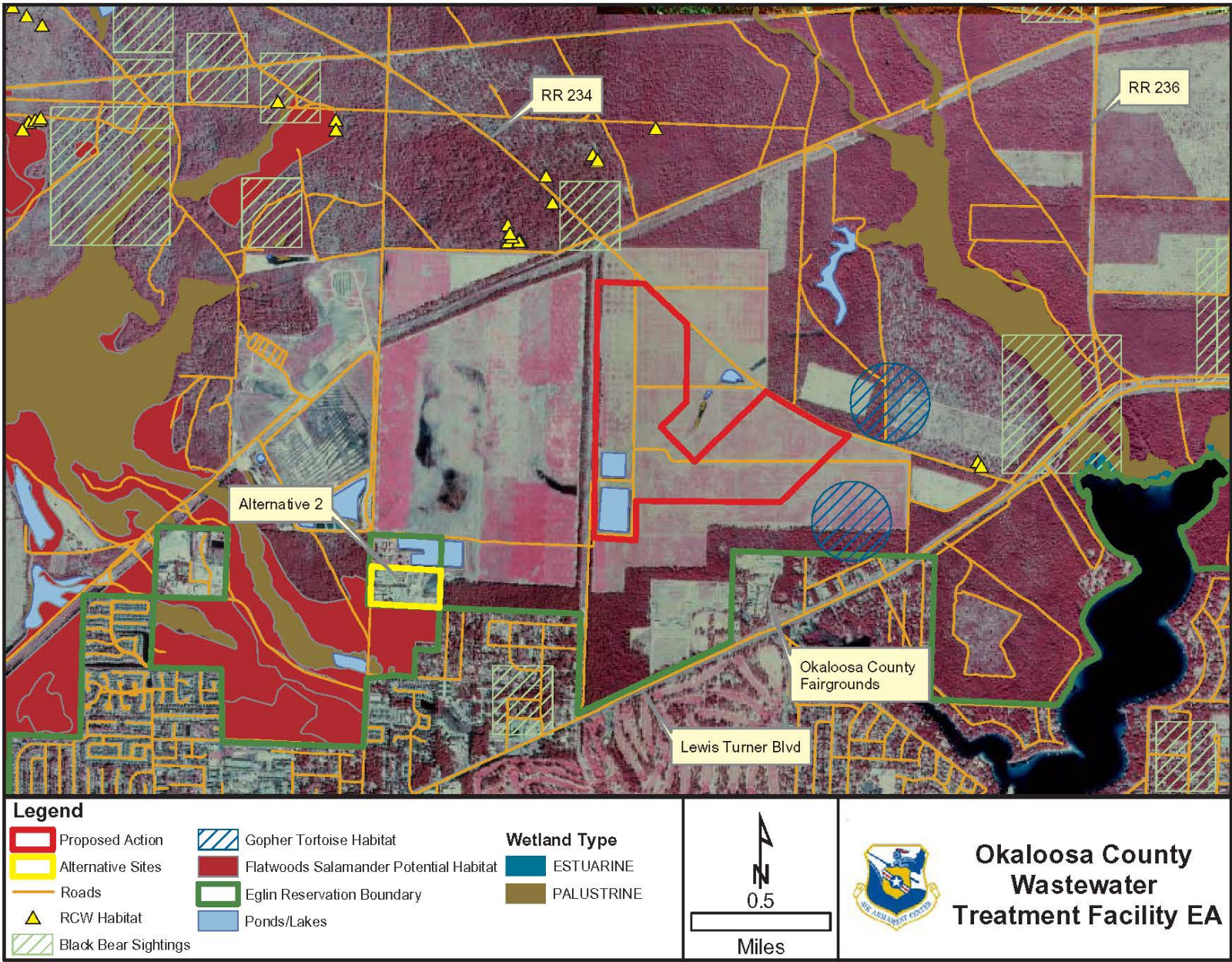


Figure 3-1. Sensitive Habitats/Species

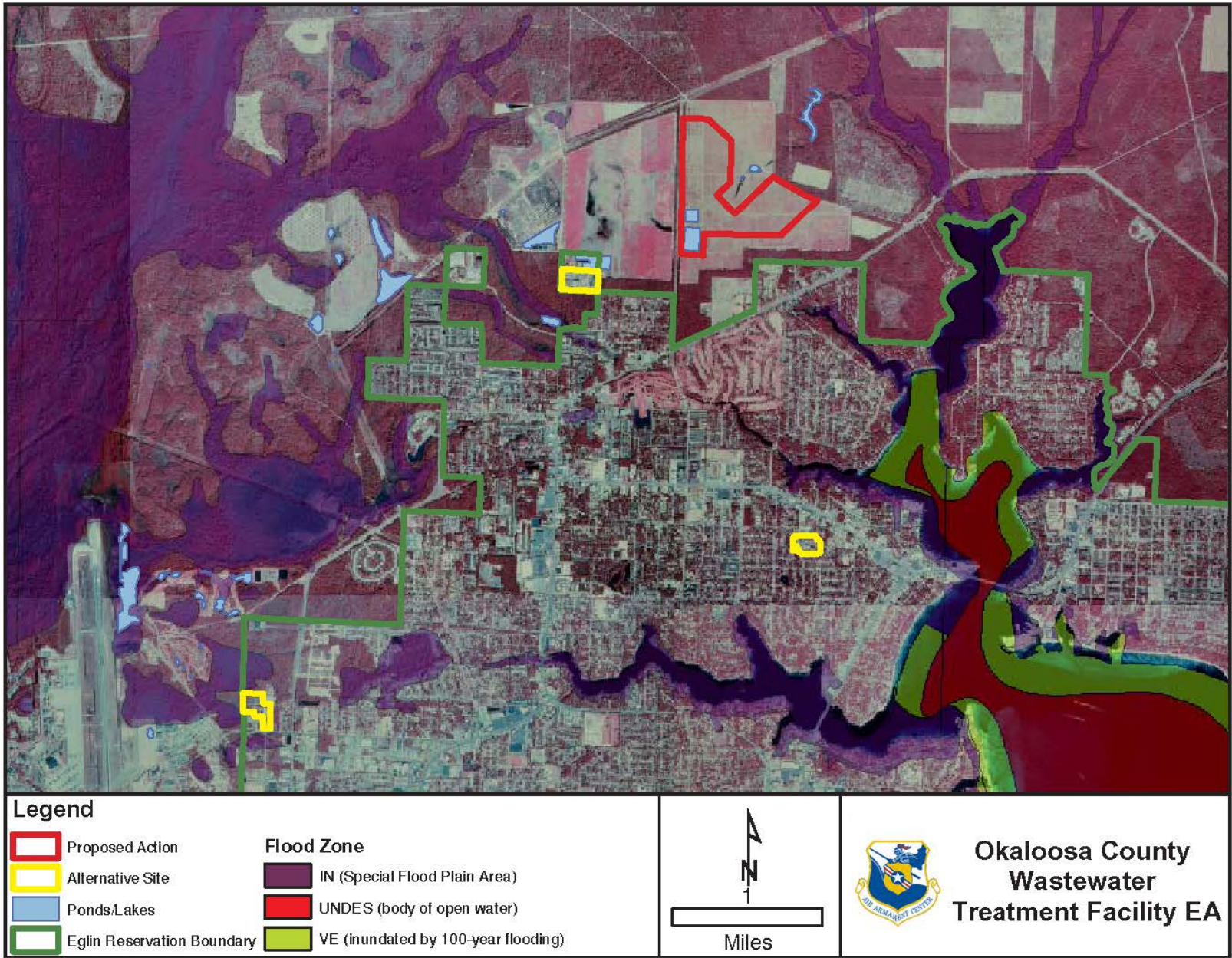


Figure 3-2. FEMA Map

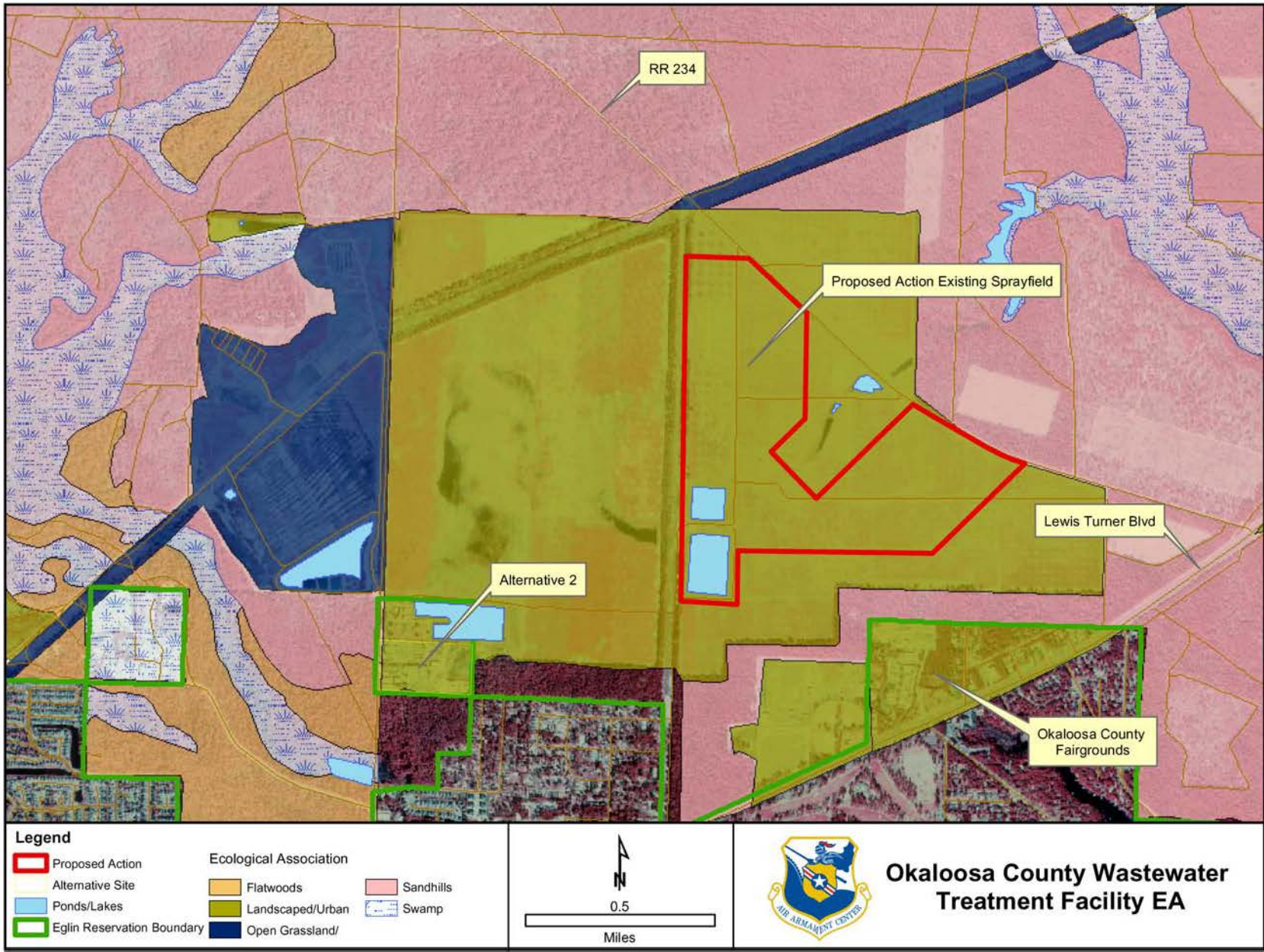


Figure 3-3. Ecological Associations Eglin Reservation

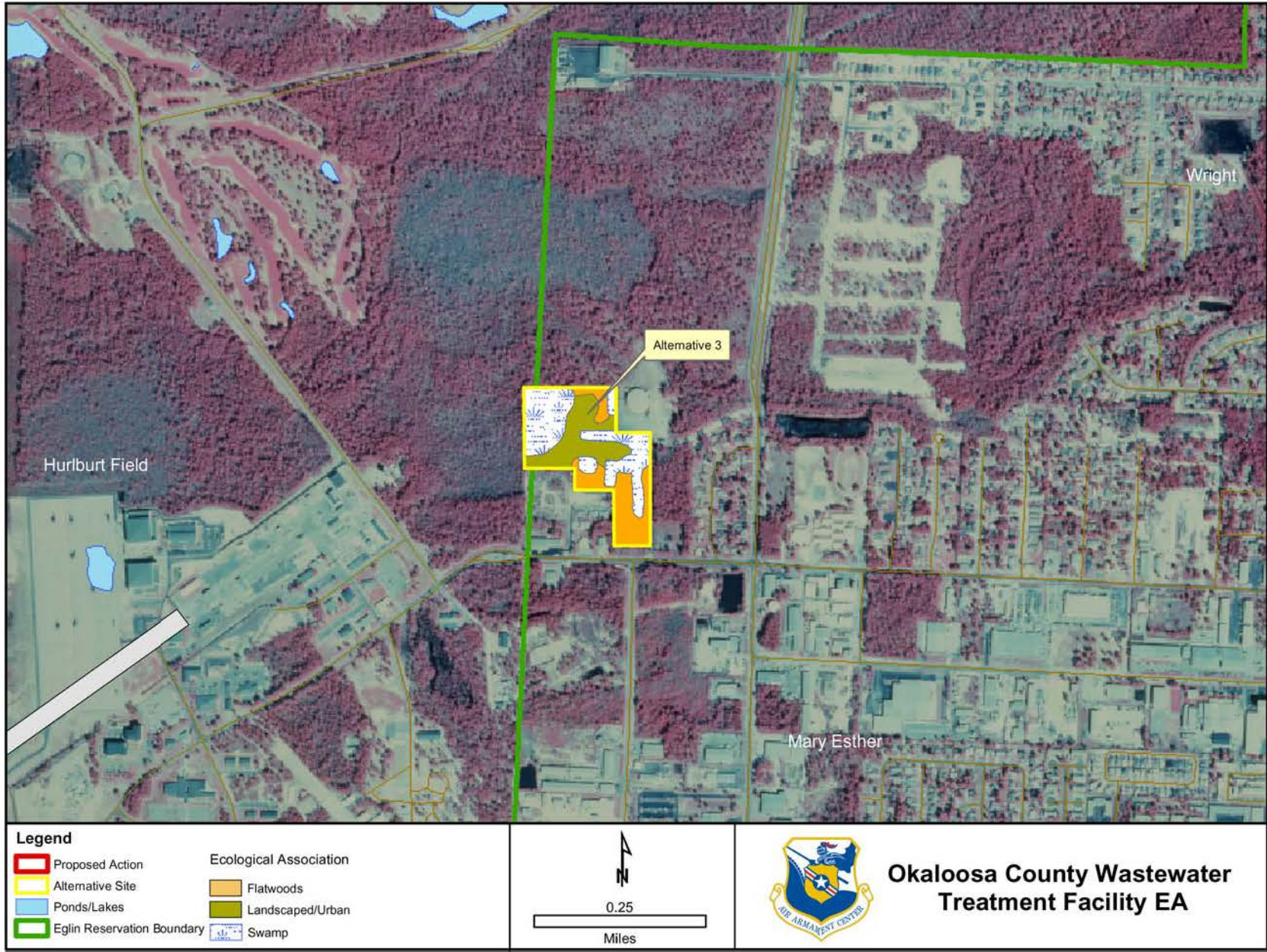


Figure 3-4. Ecological Associations Hurlburt Field East Gate Site

Sandhills

The Sandhills ecological association is underlain primarily by Lakeland soils. These soils are deep, sandy, and well drained, creating a dry condition. It is characterized by rolling sandhill ridges dissected by streams and includes pockets of habitat ranging from steeply sloped to flat and xeric (dry) to mesic (moist) (U.S. Air Force, 1996). Loamy sands, sandy loams, clay loams, and muck soils are found in lower lying areas. Dominant trees include stands of longleaf pine and sand pine, along with oaks and magnolia. Low shrubs comprise an important group and include saw palmetto, persimmon, dwarf huckleberry, gopher apple, and various oaks (U.S. Air Force, 1996). Vegetation surrounding ponds and the shoreline of creeks can include grasses and herbs or a dense shrub thicket. Typical plants include panicums, rushes, arrowheads, yellow-eyed grass, meadow beauty, and spike-rush. Floating plants such as water lilies can cover much of the water surface of quiet waters (U.S. Air Force, 1996).

Open Grassland/Shrubland

This association is found on sites that are artificially maintained, such as the test areas. This ecological association is found in disturbed areas of the Sandhills ecological association. Mechanical methods and fire are employed to remove and prevent reestablishment of tall vegetation. Vegetative species included in this association are switch grass, broomsedge, bluestem, love grass, and woolly panicum. Riparian zones are found throughout these areas. Young scrub oaks can be found in areas that are no longer being maintained.

3.4 BIOLOGICAL RESOURCES

3.4.1 Wildlife

While the Eglin Reservation supports a rich diversity of game and nongame wildlife due to the variety of habitats found on the base, all of the alternatives are at sites that have been disturbed and would not likely support much wildlife. Alternative 1 at Garnier's WWTF lies in the middle of Ft. Walton Beach and does not support a significant wildlife population. Forested areas adjacent to sites for the Proposed Action at the County sprayfield and North Beal Extension may support wildlife, but it is not likely that the animals would migrate onto the actual sites due to lack of cover and food. Forested areas on the Alternative 3 at the Hurlburt Field East Gate area may support wildlife, but there are also disturbed locations. Below are descriptions of some of the wildlife species that are commonly found in association with the ecological associations on or near the sites of the alternatives. The characterizations provided below are not comprehensive or exclusive listings since the species utilize a variety of communities (U.S. Air Force, 1995).

Sandhills

The barking tree frog and central newt are representative amphibians to the Sandhills ecological association. Leopard frogs are found in swales containing wetlands. Reptiles include the gray rat snake, coral snake, six-lined racerunner, eastern fence lizard, gopher tortoises, and box turtles. The armadillo, feral pig, and several types of squirrels (fox, gray, and flying) also live in the Sandhills. Characteristic predators include the gray fox and bobcat (U.S. Air Force, 1995).

Raptors include the screech owl, red-shouldered hawk, and great horned owl, which nest and hunt rodents in the woodlands of the Sandhills (U.S. Air Force, 1995). Other indigenous birds include warblers, vireos, red-cockaded woodpeckers, pileated woodpeckers, white-breasted nuthatches, Bachman's sparrows, and pine siskins (bird).

Grassland/Shrubland

Representative reptiles present in the clearings and grasslands include the eastern diamondback rattlesnake, the eastern coachwhip, the southern black racer snake, the gopher tortoise, the eastern box turtle, and the slender glass lizard. Gopher tortoises are part of a habitat that includes the sensitive indigo snake and gopher frog as well as several other species (U.S. Air Force, 1995). The southern pocket gopher, cotton mouse, old field mouse, feral pig, and eastern cottontail rabbit are present in clearings and other similar habitats.

Raptors include the screech owl, red-shouldered hawk, and the great horned owl, which forage over the open areas (U.S. Air Force, 1995). The southeastern American kestrel preys on small rodents, reptiles, and insects in the clearings.

Flatwoods

Flatwood communities contain stratified forests that provide habitat for many neotropical migrants and other bird species. Mammals include the white-tailed deer, gray fox, bobcat, raccoon, gray squirrel, and flying squirrel. Several bat species also forage here. Reptiles include the black racer, corn snake, cottonmouth, and eastern diamondback rattlesnake. Sensitive animals found in this association include the flatwoods salamander, eastern diamondback rattlesnake, Bachman's sparrow, southeastern American kestrel, red-cockaded woodpecker, black bear, mimic glass lizard, and coal skink (FNAI, 1994).

Wetlands

Wetlands support both aquatic and terrestrial organisms. Large varieties of microbes, vegetation, insects, amphibians, reptiles, birds, fish, and mammals can be found living in concert in wetland ecosystems. Through a combination of high nutrient levels, fluctuations in water depth, and primary productivity of plant life, wetlands provide the base of a complex food web, supporting the feeding and foraging habits of these animals for part of or all of their life cycle. During migration and breeding, many nonresident and transient bird and mammal species also rely on wetlands for food, water, and shelter.

3.4.2 Sensitive Species

Sensitive species include those with federal endangered or threatened status, federal candidate species, and state endangered, threatened, and species of special concern status (U.S. Air Force, 1995). Sensitive species and potential sensitive species habitat have been found near the County sprayfield (Proposed Action) and North Beal Extension (Alternative 2) sites, but not on the actual sites (Figure 3-3). These species are listed in Table 3-2. No sensitive species are known to exist on or near the Garnier's WWTF (Alternative 1) site. One sensitive plant species has been found near the Hurlburt Field East Gate (Alternative 3) site, but it is unknown if sensitive species occupy the site itself because it is private property and no data were available.

Table 3-2. Federal and State Listed Species Near Sites

Federal		
Sensitive Species	Habitat	Found Near These Sites
<i>Endangered</i>		
Red-cockaded woodpecker (<i>Picoides borealis</i>)	Longleaf pine forests over most of Eglin AFB. RCW densities are high near ranges due to the beneficial effect of range fires controlling the underbrush in these areas.	Existing County Sprayfield (Preferred Alternative)
<i>Threatened</i>		
Flatwoods salamander (<i>Ambystoma cingulatum</i>)	Flatwoods, Wetland and Riparian	Existing County Sprayfield (Preferred Alternative) North Beal Extension (Alternative 2) Hurlburt Field East Gate (Alternative 3)
State		
Sensitive Species	Habitat	Found Near These Sites
<i>Endangered</i>		
White-topped pitcher plant (<i>Sarracenia leucophylla</i>)	Common in wet prairies and wet flatwoods.	North Beal Extension (Alternative 2) Hurlburt Field East Gate (Alternative 3)
<i>Threatened</i>		
Red-cockaded woodpecker (<i>Picoides borealis</i>)	Longleaf pine forests over most of Eglin AFB. RCW densities are high near ranges due to the beneficial effect of range fires controlling the underbrush in these areas.	Existing County Sprayfield (Preferred Alternative)
Chapman's butterwort (<i>Pinguicula planifolia</i>)	Found in bogs and pinelands.	North Beal Extension (Alternative 2) Hurlburt Field East Gate (Alternative 3)
Curtiss' sandgrass (<i>Calamovilfa curtissii</i>)	Found in mesic and wet flatwoods.	Hurlburt Field East Gate (Alternative 3)
Florida black bear (<i>Ursus americanus floridanus</i>)	Utilizes riparian areas.	Existing County Sprayfield (Preferred Alternative) North Beal Extension (Alternative 2)
<i>Species of Special Concern</i>		
Gopher tortoise (<i>Gopherus polyphemus</i>)	Primarily found in longleaf pine and xerophytic oak woodlands and open grasslands of the test areas.	Existing County Sprayfield (Preferred Alternative)

Federal Requirements

An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is any species that is likely to become endangered within the future throughout all or a significant portion of its range due to factors such as loss of habitat and anthropogenic effects. A candidate species is one for which the U.S. Fish and Wildlife Service (USFWS) has on file sufficient information on biological vulnerability to warrant a listing, but the listing is precluded at the present time. Once legally protected, it is a federal offense to "take" (import, export, kill, harm, harass, possess, or remove) protected animals from the wild without a permit. Federal candidate species should be given consideration during planning of projects, but have no protection under the Endangered Species Act. Similar regulations are in place for state-listed species (endangered, threatened, or species of special concern). While these state regulations do not apply on federal lands (Miller, 2001), Eglin, in 1992 along with the USFWS and the Florida Fish and Wildlife Conservation Commission (FFWCC), entered into a cooperative agreement to manage individual species on the installation, including both federal and state listed species.

Under 16 USC 1531 to 1544; 1997-Supp; Endangered Species Act 1973 (ESA), federal agencies must ensure that their actions (including permitting) do not jeopardize the continued existence of any endangered or threatened species or destroy or adversely modify the habitat of such species without a permit, and must set up a conservation program. A Section 7 consultation with the USFWS would be required if a take, which is defined as pursuing, molesting or harming a protected species, were to occur. If the proposed action were likely to adversely affect a federally protected species, the USFWS would determine whether jeopardy or non-jeopardy to the species population would occur. As a result, Air Force projects that may affect, either directly or indirectly, federally protected species, species proposed for federal listing, and critical habitat for protected species are subject to Sections 7 and 10 of the Endangered Species Act prior to the irreversible or irretrievable commitment of these resources (U.S. Air Force, 1995). Eglin has developed an overall goal within the Integrated Natural Resources Plan to continue to protect and maintain populations of native threatened and endangered plant and animal species within the guidelines of ecosystem management (U.S. Air Force, 2002).

3.5 CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act requires that federal agencies analyze the impacts of federal activities on historic properties. Mitigative measures are developed to minimize impacts. Defining resources that will possibly be impacted aids project planners and managers in decision-making for project site location to avoid delays necessitated by additional investigation and/or consultation.

Past surveys of Eglin AFB have indicated the presence of archaeological sites on the installation. Survey reports are filed with the Base Historic Preservation Office (BHPO) or the Cultural Resources Division (EMH) and the State Historic Preservation Officer (SHPO). An archeological survey conducted within the project area indicated there were no cultural resources present, thus SHPO consultation is not required (Shreve, 2003).

3.6 CHEMICAL MATERIALS AND HAZARDOUS MATERIALS/WASTE

Chemical materials, some of which are hazardous, may be used in the treatment of wastewater for the Proposed Action and Alternatives 1-3. According to RCRA, Section 6903(5), hazardous materials and waste are defined as substances that, because of “quantity, concentration, or physical, chemical, or infectious characteristics may cause or significantly contribute to increases in mortality or serious illnesses, or pose a substantial threat to human health or the environment.” The handling and storage of chemical and hazardous materials are governed under relevant federal regulations, which include those set forth by the Resource Conservation and Recovery Act (RCRA) (40 CFR Part 261 et. seq.), the Toxic Substances Control Act (TSCA) (15 United States Code 2601 et. seq.), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Occupational Safety and Health Administration (OSHA) (29 CFR 106) and the National Institute of Occupational Safety and Health (NIOSH). Effluent treatment is governed under Rule 62-600.400 of the Florida Administrative Code (FAC.). The amount of chemicals which may be released to the environment (discharge levels) that Okaloosa County uses is based on Florida Department of Environmental Protection, Chapter 62-550, F.A.C., Drinking Water Standards, Monitoring, and Reporting. Chemicals stored, used, and potentially discharged from the WWTF will be assessed.

The IRP is used by the Air Force to identify, characterize, and remediate past environmental contamination on Air Force installations. Although widely accepted at one time, the procedures followed for managing and disposing of wastes resulted in contamination of the environment. The IRP has established a process to evaluate past disposal sites, control the migration of contaminants, identify potential hazards to human health and the environment, and remediate the sites. There are no IRP sites located within or directly adjacent to the proposed construction area. The closest IRP site, the Wright County/Eglin AFB Petro Soil Remediation Landfill is located less than one mile west of the subject area and is listed on the State ASTM Standard Solid Waste Facilities/Landfill records database. It is designated as closed IRP Site #LF-21 and the primary contaminants of concern were volatile organic compounds (VOCs).

The Proposed Action site was used as a maintenance facility by the County Road Department and a Mosquito Control District facility prior to implementation of the sprayfield. This historical site use was assessed for potential environmental contamination from chemicals and potential hazardous waste in a Phase II Environmental Baseline Survey (USAF, 2003).

The analysis of the soil samples collected during the Phase II investigation resulted in the following findings:

- No constituents of concern (VOCs, SVOCs, pesticides, and herbicides) were detected above state regulatory limits in soil samples collected from the former Mosquito Control District facility location.
- No constituents of concern (VOCs, SVOCs, TRPH) were detected above state regulatory limits in soil samples collected from the former truck washing and maintenance facility location.
- No constituents of concern (VOCs, BTEX and MTBE, PAHs, or TRPH) were detected above state regulatory limits in soil samples collected from the former UST locations.

A historical bombing range lies within the Proposed Action area. The UXO survey and environmental consequences of potential UXO contamination will be addressed in Chapter 4.

3.7 SOCIOECONOMIC RESOURCES

Anthropogenic resources within the context of this document are defined as human related resources pertaining to environmental justice issues (i.e. socioeconomic factors such as population, schools, hospitals, demographics, housing, etc.) and safety of site workers.

Residential areas, schools, hospitals, churches, and businesses are sensitive locations in local communities where annoyance and property damage resulting from the Proposed Action could be a concern. The population density data for areas on and off Eglin, as well as locations of schools, hospitals, and churches, have been incorporated into the digital analysis process (U.S. Bureau of the Census, 1992). Population density categories include <3, 3 to 39, and >39 individuals per square mile. Areas of high population density near the alternative action locations include Fort Walton Beach and Niceville. Within a 10 mile radius of the Proposed Action, there are 27 schools: one at Hurlburt Field, two on Eglin Main Base, six in Niceville/Valparaiso area, and the remainder

in the Fort Walton Beach area. Additionally, there are three hospitals in the area, one each in Fort Walton Beach, Eglin Main Base, and Niceville.

It is important to review and evaluate the key socioeconomic factors and their complex interrelations with the economy in any environmental assessment. The socioeconomic interdependencies between Eglin AFB and the surrounding region increase the importance of cooperative planning, forecasting, and collaborative decision-making. This synergistic coordination and planning between Eglin AFB and the local communities minimizes impacts, reduces stress, and increases economic efficiencies. Economic effects to Okaloosa County, in particular, result from the injection of monies from base expenditures, demographics to support Eglin AFB's mission and activities with highly skilled labor, and the county's delicate socioeconomic balance inherent in providing incentives for businesses to locate within the county in order to ensure a satisfactory quality of life.

These dependencies are also affected by such factors as the cost of living, the ability of the region's infrastructure to sustain high technology growth, traffic (air and surface), and the cumulative environmental impacts of these effects. Independently, federal, state, and local regulations can affect the region and the base in terms of the costs of this environmental compliance and the jobs created to achieve such compliance.

There are several socioeconomic trends in the Okaloosa County area that are important to consider for this Proposed Action. Population growth is among the most important. It is forecast that the population of Okaloosa County will be 22 percent above the 2000 population numbers by 2015 (Table 3-3), which in turn means greater capacity requirements for wastewater treatment in the county.

Table 3-3. Population Forecast of Okaloosa County by 2015

County	2000 Population (a)	2015 Population (b)	Percent Change
Okaloosa County	170,498	208,100	+ 22%
State	15,982,378	20,216,700	+ 26.4%

Source: (a) U.S. Bureau of the Census, 2001
(b) University of Florida, 2001

The challenges this poses for the county drive activities, including the Proposed Action, to construct a replacement plant on the existing sprayfield site and build a wastewater treatment facility and RIBS.

While Okaloosa County's population increases, so does the demand for land. The ability to house a growing labor market and provide jobs and civil infrastructure (hospital, schools, roads, etc.) will place increased pressure on Eglin AFB leadership to discover collaborative solutions to the inevitable encroachment.

The socioeconomic interdependencies between Eglin AFB and the surrounding region, particularly Okaloosa County, are apparent. Through cooperative planning, Eglin AFB and regional planners can develop solutions to socioeconomic problems, such as the current shortage of affordable housing both on and off base, that are mutually beneficial to both the base and the region. The events of the September 11, 2001, terrorist attack will produce both short term and

long terms effects on the Eglin socioeconomic ROI. It will take time to measure these effects and mitigate any negative effects on the socioeconomic fabric of this region.

3.8 ENVIRONMENTAL JUSTICE

Environmental justice addresses the potential for a proposed federal action to cause disproportionately high and adverse health and environmental effects on minority populations or low-income populations.

Executive Order 12898, Environmental Justice, was issued by the President on 11 February 1994. Objectives of the Executive Order, as it pertains to this document, include identification of minority and low-income populations and a determination as to whether the proposed federal action or any of the alternatives would have disproportionately high and adverse health or environmental effects on those populations. Accompanying Executive Order 12898 was a Presidential Transmittal Memorandum that referenced existing federal statutes and regulations to be used in conjunction with Executive Order 12898. One of the items in this memorandum delineated the use of NEPA policies and procedures. CEQ and Air Force Guidance for implementation of the executive order is contained in the Interim Guide for Environmental Justice Analysis with the Environmental Impact Analysis Process (EIAP) dated November 1997 (U.S. Air Force, 1997).

Information in the 1990 Census of Population and Housing (Geolytics, 1996) was used to identify minority populations and low-income populations in Santa Rosa, Okaloosa, and Walton counties.

Although post-1990 information is available for some measures of race and income, the specific measures used in the environmental justice analysis are only available from the Census. For example, the Bureau of the Census reports race, and separately ethnicity, including Hispanic origin by race, which together have been used to calculate the minority population. The post-1990 information reports race, and separately, Hispanic origin, but overlaps between these two categories are not reported, which therefore prevents making an accurate count of the total minority population. The definitions that follow were used in this analysis:

Minority population: All people of Hispanic origin, regardless of race, and all Non-Hispanic people who are Black, American Indian, Eskimo or Aleut, Asian or Pacific Islander, or Other race are included in the minority population. The percentage of minority people is calculated as a percentage of the total population.

Low-income population: Poverty status is used to calculate the low-income population. Poverty status is defined as people living below the poverty level (\$12,674 for a family of four in 1989, adjusted based on household size) as reported in the 1990 Census of Population and Housing. The percentage of low-income people is calculated as a percentage of all people for whom the Bureau of the Census determines poverty status, which is generally a slightly lower number of people than the total population, based on a sample.

The demographic profile of the region in which the project area is located provides the context within which the environmental justice analysis would be conducted. In order to determine whether or not environmental or health effects would disproportionately affect minority or

low-income populations, it is necessary to establish an appropriate basis of comparison. This basis is the Community of Comparison (COC). For the State of Florida, USEPA Region 4 has identified the COC as 32 percent for minority populations and 30 percent for low-income families (U.S. Air Force, 2000).

There are minority/low income communities in the immediate vicinity of Garnier's WWTF (Alternative 1). There are minority communities located around the Hurlburt East Gate site (Alternative 3). At both the existing county sprayfield (Proposed Action) and North Beal Extension (Alternative 2) locations, there are no COCs adjacent to or in the immediate vicinity of these sites.

3.9 SAFETY

UXO

A historical bombing range lies within the Proposed Action area. Survey findings resulted in trash and debris from routine operation of the sprayfield (Holland, 2003). Details of the survey will be discussed in Chapter 4.

BASH

The Federal Air Administration recommends a distance of five statute miles from approach or departure airspace for wildlife attractants that may cause hazardous wildlife movement (FAA, 1997). Although the plant is not located within the approach/departure corridors of these airfields, the distance of the treatment facility from the airfields are within five statute miles (Eglin - 4.2 miles and Hurlburt - 3.75 miles) at the closest points.

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4. ENVIRONMENTAL CONSEQUENCES

The purpose of this chapter is to analyze the potential impacts of the Proposed Action in relation to the issues and resources identified in Chapters 1 and 3 of this document.

Issues

- Noise
- Land Use
- Physical Resources
 - Air Quality
 - Soils
 - Water and Wetlands Resources
- Biological Resources
 - Habitat Alteration/Direct Physical Impact
- Cultural Resources
- Chemical Materials and Hazardous Materials/Waste
- Socioeconomic Resources
- Environmental Justice
- Safety

4.1 NOISE

As previously stated, noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. The assessment of noise resulting from the proposed construction activities considers the anticipated operational use of this equipment.

The EPA has identified an eight-hour equivalent noise level of 75 dBA as a safe exposure limit for humans working in a construction setting or otherwise exposed to noise from heavy machinery in the workplace.

Noise issues considered in this section pertain to nonparticipating personnel outside of the actual construction site, and consider whether those persons would be exposed to excessively elevated noise levels as a result of the construction activities.

The noise assessment in this EA is based on data provided by Air Force Bioenvironmental Engineers (U.S. Air Force, 1998). During a study for a construction project, a sound meter was used to measure noise generated by the types of vehicles and equipment that would be used in construction activities. These measurements were made at varying distances and under varying

modes of operation. In most cases, these included the engine running at idle, full power, and the vehicle moving under “load” conditions (U.S. Air Force 1998). The types of equipment considered in this assessment and their associated noise levels under different conditions at varying ranges are shown in Table 4.1.

Table 4-1. Equipment Noise Levels

Equipment	Operating Mode	Noise Levels (in dBA) at Indicated Distances			
		125 Feet	400 Feet	500 Feet	600 Feet
Dump Truck	Idle	70	60	58	56
	Full Power	71	61	59	57
	Moving	74	64	62	60
Backhoe	Idle	62	52	50	48
	Full Power	71	61	59	57
	Moving	77	67	65	63
Roller	Idle	61	51	49	47
	Full Power	66	56	54	52
	Moving	83	73	71	69
Dozer	Idle	63	53	51	49
	Full Power	74	64	62	60
	Moving	81	71	69	67
Grader	Idle	63	53	51	49
	Full Power	68	58	56	54
	Moving	78	68	66	64
Sweeper	Idle	64	54	52	50
	Full Power	76	66	64	62
	Moving	85	75	73	71
Rock Crusher	Operating	83	73	71	69

Sources: U.S. Air Force 1998

To assess potential noise impacts from proposed construction activities, a “maximum-use” scenario was developed. For this scenario, it was assumed that on any given day, the actual construction land area would be a square 300 feet by 300 feet. Furthermore, it was assumed that a buffer area would be established around the actual construction site and that this buffer area would extend 500 feet from the center of the construction area.

Next, using a grid, specific equipment was spatially dispersed throughout the construction area in a random manner. This equipment was assumed to operate in some mode for six-hours during an eight-hour day. Time of operation in specific modes during these six hours was then assigned to each specific equipment item at the multiple grid locations throughout the site. Based on recorded noise levels, and considering noise attenuation based on standard spherical spreading, a six-hour equivalent noise level ($L_{eq, 6 \text{ Hr}}$) was calculated at the boundary of the 500-foot buffer zone. Based on standard spherical spreading, noise levels are reduced by 6 dBA for every doubling of distance from the noise source. Due to the relatively small size of the area considered and the minimal distances to the boundary of the buffer zone, additional attenuation due to ground and atmospheric absorption were not considered since they would be so slight.

To assess potential health impacts from the estimated noise levels, the 6-hour L_{eq} was normalized to an 8-hour L_{eq} . Under the “maximum-use” scenario, noise levels calculated at the 500-foot

boundary indicate a 6-Hour Equivalent noise level ($L_{eq\ 6-Hr}$) of 78 dBA. When this value is normalized to an 8-hour workday, the equivalent noise level would be $L_{eq\ 8-Hr}$ 77 dBA.

Proposed Action

There are no noise sensitive receptors within 2,000 feet of the proposed WWTF location. Beyond that distance is a residential area south of the proposed location. Noise attenuates in intensity by approximately 6 dB for every doubling of distance. If the 8-hour workday noise at the perimeter of the construction area is 77 dBA, then approximate noise levels at the residential area 2,200 feet away would be 65 dBA, which is less than the EPA standard of 75 dBA. Thus, there would be no adverse effects from construction noise.

Alternative 1 - Garnier's WWTF

The proposed construction could have the potential to create increased noise in the area, primarily as a result of the operation of heavy equipment. An elementary school, which is considered a noise sensitive receptor, is located adjacent to the existing WWTF on the side opposite to where construction would occur, but residential areas encompass the remaining sides of this alternative. A chain-link fence interwoven with solid strips of material separates the facility and school and residential areas. The fence provides something of a visual barrier but would not appreciably attenuate sound. The existing site facilities separate the alternative construction site from the school, which would serve to some degree as a noise buffer. Construction would occur primarily during the weekdays when the school was occupied. Sound would be buffered to some extent by the school building itself. Noise levels reaching the school would approach 78 dBA, which exceeds the 75-dBA USEPA recommended safe noise level for an 8-hour workday. The residential areas would be exposed to noise that exceeds the 75-dBA limit; thus, some erection of sound barriers may be required to alleviate noise. From a noise standpoint, this alternative is least desirable.

Alternative 2 - North Beal Extension

The property at the North Beal Extension is a privately owned Construction and Demolition Debris Landfill. Current activity and noise at this site likely already involves bulldozers, dump trucks and other types of heavy machinery. Thus construction noise and disturbance would not differ substantially in nature from existing noise. The nearest residential area is approximately 2,000 feet away. The nearest school is over a mile away. The 75-dBA limit would not be exceeded and there would be no noise effects from this alternative. In terms of noise, this alternative is comparable to the Proposed Action.

Alternative 3 - Hurlburt Field East Gate

This site lies adjacent to a church, residential housing, and commercial and forested areas. A church is considered a noise sensitive receptor and would be exposed to construction noise during the weekdays. Weekends, when church activity is highest, would be periods of low or no construction activity. The nearest noise sensitive receptors are the church located about 150 feet from the perimeter of this alternative and a residential area located 300 feet from the perimeter of this alternative and separated from the alternative site by a wooded area. Due to the location of a

wetland area along the boundary of church property and the alternative site, construction activities would probably be limited to the more interior areas of the site.

If terrain between the site and residential area were flat and not wooded, noise approaching the 75-dBA limit would likely reach the residential area. Densely vegetated areas of at least 100 feet in depth can reduce noise by 3 to 7 dBA (New York State Department of Environmental Conservation, 2001). The wooded area adjacent to the site is about 300 feet in width and would likely reduce perceived noise levels at the boundary of the residential area to below 75 dBA. However, there is no wooded area between the church and alternative site. Noise reaching the church would not be significant on the weekends but could approach or exceed the 75-dBA limit during weekdays, but this would depend on how far from the perimeter of the alternative site construction was occurring. The wetland areas would dictate that construction occur in the interior of the site.

Depending on the income status of persons living near this alternative, construction of a WWTP near the residential area could constitute an environmental justice impact both from a noise standpoint and from an aesthetic/nuisance standpoint.

Thus from a noise standpoint, this alternative presents a less desirable option than the Proposed Action.

No-Action Alternative

A WWTF would not be constructed or expanded. Noise impacts would continue at current operational levels.

4.2 LAND USE

Proposed Action

The Proposed Action would take place on 255.51 acres of the existing County Sprayfield site on Eglin AFB. A minimum 100-foot forested buffer surrounds the property. Conflicts with the users on base property for the Proposed Action are not anticipated due to the location of the property that is buffered from developed areas of the base. Thus, land use impacts from the Proposed Action are not anticipated.

Alternative 1 - Garnier's WWTF

Residential housing and an elementary school lie within close proximity to the facility (Appendix B). Minimal land is available for the expansion required to meet 6.5 MGD treatment, which would require increased infrastructure and piping of effluent to the existing sprayfield site. Therefore, expansion and upgrade activities at the Garnier's WWTF (Alternative Action 1) would impact land use at this site.

Alternative 2 - North Beal Extension

Alternative 2 at the North Beal Extension site entails facility construction in an "industrialized" area that is a Construction and Demolition Debris Landfill (Appendix B). Currently, there is

only one access road into the facility. It is not anticipated that impacts would result from construction of the facility at this location.

Alternative 3 - Hurlburt Field East Gate

Alternative Action 3 proposed construction of the WWTF at the Hurlburt Field East Gate site (Appendix B). A church and residential housing area lie in close proximity to the property (~100 yards). Additionally the purchase and development of the private land would be costly to Okaloosa County. Therefore, impacts to land use may occur.

No-Action Alternative

Construction of the WWTF and RIBS would not take place. Therefore, no impacts would occur.

4.3 PHYSICAL RESOURCES

This section analyzes potential impacts to physical resources such as air quality, soils, water quality and wetland areas resulting from the Proposed Action and Alternatives

4.3.1 Air Quality

Potential impacts to air quality are associated with chemical material emissions from facility construction and training activities involving the detonation of live munitions. The quality of air in a given location or region is generally described by the concentrations of various measurable substances known as “criteria pollutants,” which includes CO, Pb, NO₂, PM₁₀, SO₂, and the ozone precursors NO_x and VOC.

Once air-borne pollutants are generated, the process of atmospheric mixing, dilution, and dispersion can quickly alter the extent and duration of pollutant peak concentrations. The dispersion of pollutants in the atmosphere is basically dictated by the amount of turbulence in the atmosphere surrounding an emission source. Wind, which is the horizontal motion of the atmosphere, is a major source of turbulence and is therefore extremely important in air pollution meteorology. Wind direction and wind speed are typically the most important meteorological inputs for dispersion modeling analysis and siting ambient air monitors. Wind speed affects the travel time from the pollutant source to the receptor and the dilution of polluted air in the downwind direction. Wind direction determines the direction of the greatest impacts. Wind speed is inversely proportional to ground-level air concentrations, so that the lower the wind speed, the higher the air concentration. Also, knowing the probable wind speed and direction for a particular time of the year can be helpful for construction, mission planning, and designing structures that must face severe weather conditions such as wind driven rain.

Pollutant dispersion is aided by the convective and turbulent mixing that takes place in the lower atmosphere. The vertical extent to which this dispersion takes place is driven by atmospheric stability. Stability is very important because the vertical motion in the atmosphere over a polluted area determines how quickly and effectively pollutants are mixed in the air and dispersed. Characteristically during the day, air near the earth’s surface is warmer than that aloft. The warm air rises and the cooler air sinks and replaces it. This causes a vertical mixing in the atmosphere

that provides a large volume of air in which pollutants can disperse. This vertical mixing is referred to as unstable atmospheric conditions. On the other hand, stable conditions usually occur when warmer air is above cooler air in the atmosphere, inhibiting vertical mixing. This situation is called an inversion and can occur near the surface or aloft. With no vertical mixing, pollutants generated from ground-level sources will remain within the inversion layer and tend to be in higher concentrations. This situation usually occurs at night or early in the morning.

The greater the height of vertical mixing, the larger the volume of the atmosphere is available to dilute the pollutant concentration. The maximum altitude to which effective vertical mixing occurs is called the mixing height or mixing depth and varies diurnally and from season to season. Daytime mixing heights for the northwestern portion of Florida are higher than for most of the continental United States. Average morning mixing heights range from 500-700 meters (1,640-2,297 feet) aboveground level (AGL) in the winter to 500-1,000 meters (1,640-3,281 feet) AGL in the summer. Average afternoon mixing heights range from 800-1,000 meters (2,625-3,281 feet) AGL in the winter to 1,400-1,600 meters (4,593-5,249 feet) AGL in the summer.

In general, an analysis of project generated air emissions is required to determine if:

- There would be a violation of a National Ambient Air Quality Standard (NAAQS);
- Emissions would contribute to an existing or projected air quality violation;
- Sensitive receptors were exposed to substantial pollutant concentrations;
- Pollutant emissions were equal to or greater than 10 percent of Okaloosa County emissions;
- A permit to operate was required; or
- A change to the Title V permit or FESOP was required.

Under existing conditions, the ambient air quality in Okaloosa County is classified as attainment for all criteria pollutants. Detailed analysis to determine if the proposed action would result in a violation of an NAAQS would require site-specific dispersion modeling. However, for this proposed action a screening level analysis is appropriate. Emissions from the construction and operation of the proposed action were calculated and compared to the existing Okaloosa County emission inventory. Potential impacts to air quality are then identified as an increase of 10 percent or more in pollutant emissions above an established, known base-line year. It is unlikely that an increase of less than 10 percent could result in an increase in ambient pollutant concentrations above NAAQS levels. This approach is outlined according to Section 176(c) of the Clean Air Act (CAA) associated with the USEPA promulgated "General Conformity Rule" that is codified as 40 CFR 93, Subpart B.

The General Conformity Rule applies only to federal actions occurring in non-attainment and maintenance areas. Since the Proposed and Alternative Actions are located in areas considered in attainment, the Air Force will not need to prepare a conformity determination. However, the federal action must still comply with certain conformity requirements, namely that the federal action may not exceed the threshold and criteria outlined above. Therefore, the impact analysis used the 10 percent criteria to assess potential impacts. This screening level analysis used more stringent criteria, by comparing the project-related emissions to the county emission inventory, rather than the regional inventory as allowed by the Conformity Rule.

Proposed Action: Lease at the sprayfield site for construction, operation, and maintenance of a wastewater treatment facility.

Facility Construction Emissions

Fugitive dust from ground-disturbing activities and combustive emissions from construction/demolition equipment would be generated during construction under the Proposed Action. Analysis focuses on estimating associated emissions using USEPA emission factors for construction activities and comparing those estimations to Okaloosa County's 2000 Air Emissions Inventory.

Under the Proposed Action, it is anticipated that potentially 255.51 acres would be disturbed. Table 4-2 shows the resultant air emissions for facility construction activities, based on USEPA emission factors for estimating emissions from ground disturbing activities (USEPA, 1998), and a comparison to Okaloosa County's Air Emission Inventory for 2000.

Table 4-2. Total Construction Activities

Emissions (tons/year)					
	CO	NO _x	PM ₁₀	SO _x	VOC
Okaloosa County	91,359.85	8,709.06	3,756.45	405.48	11,957.66
Project Construction	1.61	21.44	2.59	2.06	2.78
Percent of Okaloosa County Emissions	0.00	0.25	0.07	0.50	0.02

As can be seen from the information presented in the table, increased emissions are very small when compared to the Okaloosa County emissions inventory, and are well below the 10 percent criteria for all criteria pollutants. In addition, any effects from emissions should be temporary and would fall off rapidly with distance from construction sites.

Operation

VOCs are emitted from wastewater collection, treatment, and storage systems through volatilization of organic compounds at the liquid surface. Emissions can occur by diffusive or convective mechanisms, or both. These emissions originate primarily from the clarifier. Preliminary design specifications were obtained from current plant operators¹. Since no monitoring of total organic content is conducted for the current influent or effluent, emissions were calculated using conservative industry averages and published data, assuming minimal control efficiencies. The resulting increase in emissions associated with the increased maximum daily throughput of approximately 3.1 MGD is presented on Table 4-3.

Table 4-3. Total Operational Activities

Emissions (tons/year)					
	CO	NO _x	PM ₁₀	SO _x	VOC
Okaloosa County	91,359.85	8,709.06	3,756.45	405.48	11,957.66
Project Operation	0	0	0	0	36
Percent of Okaloosa County Emissions	0	0	0	0	0.3

As shown above, increased emissions are very small when compared to the Okaloosa County emissions inventory, and are well below the 10 percent criteria for all criteria pollutants.

Permits

Environmental Compliance (AAC/EMC) was granted exclusion from the Title V Applicability for the Proposed Action by the Florida Department of Environmental Protection (see Appendix A). As Okaloosa County's proposed wastewater treatment facility would not be under the control of Eglin AFB, the department found no reason to include it in the Title V permit for Eglin. The current WWTF is not permitted by the FDEP and does not monitor or report annual emissions (Crews, 2003).

Alternative 1 - Garnier's WWTF

Alternative 1 would result in some construction activities, at or below the levels (based on size of ground disturbance needed) used to estimate construction emissions under the Proposed Action. In addition, the operational capacity (based on million gallons per day) would be equal to or less than those used to estimate operation emissions under the Proposed Action. Thus, the Alternative 1 would not result in emissions increases greater than those shown above. Since the project-related emissions increases were found to be well below 10 percent of Okaloosa County's inventory, this alternative action would similarly be below the criteria.

Alternative 2 - North Beal Extension

Same as Alternative 1 and the Proposed Action; no impacts to air quality would occur.

Alternative Action 3 - Hurlburt Field East Gate

Same as Alternative 1 and the Proposed Action; no impacts to air quality would occur.

No Action Alternative

The facility would not be constructed and operated. Therefore, no additional impacts to air quality would occur.

4.3.2 Soils**Proposed Action**

Construction of the Proposed Action on the Existing County Sprayfield site on Eglin leased property would encompass approximately 255.51 acres of land area to include the treatment facility and RIBS. The site is currently cleared of trees and shrubs. Excavation of soil would occur for facility construction and installation of the RIBS. Each RIB would be graded to produce a three-foot berm around the perimeter with a bottom footprint of approximately 14.5 acres. The RIBS allow for the rapid infiltration of the treated wastewater through the soils, which adds further natural treatment to the effluent before it eventually reaches the sand and gravel aquifer.

The Lakeland association soils are sandy, well drained and highly permeable, which are optimal characteristics for the RIBS. Based on the permeability of Lakeland soils, there is minimal potential for effluent to pool within the RIB. Additionally, runoff potential from the RIBS is

highly unlikely due to implemented engineering controls of a three-foot berm around the perimeter of each RIB.

To minimize erosion potentials near drainage areas during construction activities, best management practices (BMPs) should be employed, such as use of hay bales or silt fencing. Technical guidelines and references for existing sediment and erosion BMPs can be obtained from documents provided by the USEPA (USEPA, 2003). Additionally, disturbed areas not within the RIBS would be reseeded with native grasses. Any non-native invasive exotic plant species found during the project would be treated with herbicides to prevent further spread. BMPs such as weed-free hay bales and seeds and cleaning of equipment prior to entering the facility should be implemented to prevent the introduction of non-native species. An NPDES construction permit would be required if more than one acre of soil surface were to be disturbed.

Based on soil characteristics and the implementation of the aforementioned engineering design and BMPs, adverse impacts to soils from the Proposed Action are not probable. If any cultural resources were discovered during construction activities, site work at that location would cease and AAC/EMH would be notified.

Alternative 1 - Garnier's WWTF

Excavation of soil would be significantly reduced as compared to the Proposed Action. Expansion of the Garnier's Facility would require the clearance of less than five acres, as the RIBS would not be employed. The facility lies in an urban area and the majority of the site property surrounding the facility is currently cleared. The use of BMPs, as described previously, would minimize soil erosion. No adverse impacts are anticipated.

Alternative 2 - North Beal Extension

Based on preliminary WWTP design, this Alternative site would cover approximately eight acres for the construction of the new WWTP and associated parking area. A significant portion of this site is currently cleared, although intense cleanup of waste and rubble pits and piles would be required to construct the facility. An NPDES construction permit would be required if more than one acre of soil surface were disturbed at this location. Clearing the construction area by mowing vegetation would not require a permit, whereas bulldozing would. Based on current land use as a waste landfill, adverse impacts are not expected at this site.

Alternative Action 3 - Hurlburt Field East Gate

Approximately eight acres of soil would be displaced for construction of the WWTP. The site lies within a wetland area. The use of BMPs, as described previously, should be used to minimize soil erosion and migration to wetland areas. An NPDES construction permit would be required if more than one acre of soil surface were disturbed. Clearing the construction area by mowing vegetation would not require a permit, whereas bulldozing would. Adverse impacts to soils are not anticipated if BMPs are followed.

No-Action Alternative

The WWTF and RIBS would not be constructed; therefore, adverse impacts would not occur.

Permits Required

An NPDES construction permit would be required if more than one acre of soil surface were disturbed. Clearing the construction area by mowing vegetation would not require a permit, whereas bulldozing would. Under the Proposed Action, the treatment facility and RIBS construction use the least impactful means possible in addition to utilizing the available cleared areas.

A NPDES Stormwater Facility Design and Construction Permit is also required. Once in operation, Okaloosa County would be responsible for appropriate permitting through FDEP for a wastewater treatment facility.

4.3.3 Water and Wetland Resources

Potential impacts to drinking water (i.e. ground water) and surface waters are discussed in this section.

Drinking water within the region of influence is primarily obtained from the Floridan Aquifer, which must be protected from contaminants that are present in surface sources, including treated effluent. The USEPA has designated drinking water criteria for a variety of contaminants. It is worthwhile to note that the U.S. Geological Survey lists Rapid Infiltration Basins as an innovative approach for sustaining ground water resources (Alley, et al., 1999).

Surface waters can be susceptible to a number of contaminants, but those that can have the most serious impact include nutrients, such as phosphorus and nitrate. These nutrients act as fertilizers, promoting the overgrowth of algae in ponds, streams and estuaries that can in turn deplete oxygen levels and result in a detrimental condition known as eutrophication.

Other potential impacts to surface waters include construction impacts near wetland areas.

Proposed Action

The proposed design of the RIBS would accommodate inputs of 9.6 million gallons per day distributed over nine RIB ponds. The amount per acre per day would be 50,000 gallons, or about 1.1 gallons per square foot per day. Infiltration rates for sandy soils are generally about 30 inches per day. Recent water quality data from the first three quarters of 2002 indicated that sprayfield sampling wells at the Proposed Action location are in compliance with EPA drinking water standards for all chemical parameters. Water sampling depth in the wells ranged from 15 to 50 feet.

The existing WWTF is designed to produce an effluent with total nitrogen concentrations of 20 mg/L whereas the proposed WWTF is designed to produce an effluent with total nitrogen concentrations of 8 mg/L or less, a reduction of 60%. Concentrations of effluent nitrogen from the existing WWTF effluent range from 11 to 16 mg/L prior to land application and nitrate at some groundwater monitoring wells measured as high as 9.2 mg/L. The EPA standard for nitrate is 10 mg/L. Monitoring well data is shown in Appendix D.

The proposed plant would achieve the 60% reduction in total plant effluent nitrogen through the addition of a biological nutrient removal (BNR) stage. This stage promotes denitrification,

effectively reducing the total nitrogen in plant effluent. With the existing WWTF nutrient removal (essentially nitrogen) is accomplished through sprayfield application and crop uptake (Petrey, 2003). Further reduction of nitrates may occur after the treated effluent is disposed through the RIBS.

The proposed WWTF will be designed using the same process and design parameters as the county's existing Russel Stephenson Plant. The total nitrogen in effluent from the existing Russel Stephenson Plant ranges from 1-4 mg/L which is typical of this process. Thus, there should be a significant reduction in groundwater nitrate concentrations upon removal of the existing sprayfield and installation of the new WWTF and RIBS (Mobley, 2003).

No potable water is drawn from this site, and transport of constituents through local drinking water supplies is not anticipated since the depth to the upper Floridan Aquifer is approximately 300 to 350 feet. According to the Eglin GIS, the nearest potable well is approximately 4,000 east of the current sprayfield boundary, well beyond the 500-foot minimum setback distance specified in Florida Administrative Code 62.532, Water Well Permitting and Construction Requirements.

Although the RIBS system has been shown to reduce chemical concentrations 50 to 80 percent, some micronutrients, specifically phosphorous and nitrate, may not be entirely filtered out by the process and enter groundwater. Lateral transport through groundwater could eventually deposit these nutrients in surface waters. Since the proposed WWTF would have upgraded nutrient removal capabilities over the existing plant, no significant (i.e. exceeds FDEP standards) introduction of nutrients to ground or surface waters would occur. Water monitoring data from Timberlake Pond near the current sprayfield indicates that from 1998 to 2002 waters met USEPA criteria for Class III surface waters for the parameters monitored (Appendix D). Timberlake Pond is somewhat north of the proposed site and groundwater flows in a general southerly direction. No impacts to Timberlake pond are anticipated since it is located north of the treatment facility and up gradient to the direction of groundwater flow.

Water quality data collected from the eleven wells, which are dispersed throughout the sprayfield site include monitoring of chromium, lead, fecal coliform, pH, sulfate, nitrate, total dissolved solids, arsenic, cadmium and chloride. Water level is also measured periodically at each well. A comparison of quarterly data for each well and water quality standards against which the data is measured is provided in Appendix D. Water monitoring data from Timberlake Pond near the current sprayfield indicates that from 1998 to 2002 waters met USEPA criteria for Class III surface waters for the parameters monitored (Appendix D). None of the parameters exceed FDEP standards. Thus, there are no impacts from historical sprayfield operations to land that will be returned to the Air Force.

Wetlands

According to GIS maps, a small wetland area exists along the eastern boundary of this site. No impacts to this area are expected and a Section 404 permit would not be required.

Alternative 1 - Garnier's WWTF

A WWTP currently exists at this location. Expansion of the Garnier's WWTF at this location would require best management practices to prevent erosion from cleared land areas. Expansion

of the WWTP would have no impacts on surface or ground water quality. No wetlands would be disturbed at this location.

Alternative 2 - North Beal Extension

Construction of a WWTP at this location would require best management practices to prevent erosion from cleared land areas. Surface and ground water would not be affected. No wetlands are present at this alternative.

Alternative 3 - Hurlburt Field East Gate

Surface waters and a cypress swamp area are located along the boundary of this site adjacent to the church, and also through the interior portion of the site. These wetland areas dispersed throughout this location would have to be avoided, but the small workable area of this alternative may make wetland disturbance difficult to avoid depending on the exact placement of WWTP facilities. A Section 404 permit may be required for this location.

No-Action

Under the No-Action Alternative, no change with respect to the current condition of water quality and wetland areas would occur.

Permits Required

An NPDES construction permit would be required if more than one acre of soil surface were disturbed. Clearing the construction area by mowing vegetation would not require a permit, whereas bulldozing would. Under the Proposed Action, the treatment facility and RIBS construction use the least impactive means possible in addition to utilizing the available cleared areas.

A NPDES Stormwater Facility Design and Construction Permit is also required. Once in operation, Okaloosa County would be responsible for appropriate permitting through FDEP for a wastewater treatment facility.

4.4 BIOLOGICAL RESOURCES

4.4.1 Habitat Alteration/Direct Physical Impact

Biological resource issues to be addressed in this section are the extent of habitat alteration (e.g., tree clearing to wildlife and sensitive species) that may result from the Proposed Action. Management recommendations to avoid/minimize impacts will be discussed.

Proposed Action

The Proposed Action would involve the construction and operation of a new wastewater treatment facility at the existing sprayfield site. This site has already been cleared of vegetation for the sprayfields; grading would be required. The project has been designed to avoid natural wetlands located near Road 234, thus there should be no wetland habitat alteration concerns for

the Proposed Action. No impacts to sensitive ecological habitats are anticipated from the Proposed Action.

Potential habitat for sensitive species is located near the Proposed Action site, but sensitive species should not be affected (Miller, 2002). Inactive red-cockaded woodpecker trees can be found to the north of the site, and potential flatwoods salamander breeding ponds are located to the west, but no woodpeckers currently inhabit the nearby trees and the potential salamander habitat is over one mile away. Black bear and gopher tortoises have been sighted near the site, but should not be affected by the Proposed Action. No impacts to sensitive species are anticipated from the Proposed Action.

Alternative 1 - Garnier's WWTF

This site has few trees and is surrounded by residential development in the city of Ft. Walton Beach, Florida. No wetlands exist where expansion would take place (Petrey, 2002). The site is considered a landscaped/urban community and the site does not support any sensitive species. Given the highly disturbed condition of the site and surrounding area, expansion at this site would not adversely affect any sensitive species or ecological communities.

Alternative 2 - North Beal Extension

No vegetation clearing would be involved at this alternative site. The county knows of no wetlands determinations on the property (Petrey, 2002). The waste landfill is considered a landscaped/urban environment and is not known to support any sensitive species, although potential flatwoods salamander habitat is located within one mile of the site and black bears have been seen near the site. Two state-listed plant species (Chapman's butterwort and white top pitcher plant) can also be found within one mile of the site. Given that this site is currently a waste landfill, it is highly unlikely that construction of a wastewater treatment facility at this site would adversely affect any sensitive species or ecological communities.

Alternative 3 - Hurlburt Field East Gate

Under Alternative 3, a new wastewater treatment facility would be constructed near the Hurlburt Field East Gate on what is currently private property. Because this site is located on private property, it was not possible to acquire data on the ecological associations and potential sensitive species on the property. Based on information from aerial photography and data on the ecological associations of nearby lands, it appears that most of this site is in pine flatwoods, with multiple ponds/wetlands. Construction of a wastewater treatment facility at this site would involve the clearance of approximately 10 acres of trees and could potentially impact wetlands, although construction plans could be designed to avoid wetland areas, thus minimizing impacts to wetlands. Sensitive plant species documented near this site are the state listed white topped pitcher plant, Curtiss' sandgrass, and Chapman's butterwort, which are located nearby on Hurlburt Field (Pruitt, 2003), but these plants should not be impacted by the alternative action. Potential flatwoods salamander habitat is found within one mile of the site on Hurlburt Field (Pruitt, 2003), but no impacts are anticipated from the alternative action. Based on the information available regarding sensitive species and habitats on adjoining property, no impacts to any sensitive species are anticipated.

No-Action Alternative

The facilities would not be built; therefore, there would be no impacts.

4.5 CULTURAL RESOURCES

Potential impacts to cultural resources include disturbance of the physical remains or objects or other elements of an archaeological site including sites and/or objects of religious or cultural importance to Native Americans. Coordination with AAC/EMH at the outset of the planning process helps to avoid impacting sites of cultural and archaeological significance.

The existing sprayfield site was surveyed for the presence of cultural resource artifacts. No archeological resources were present, thus no impacts to cultural resources would occur and no SHPO consultation is required (Shreve, 2002).

Alternative 1 - Garnier's WWTF

There are no identified cultural resources at this alternative site. Therefore, the expansion of Garnier's WWTF in Fort Walton Beach would not impact cultural resource areas.

Alternative 2 - North Beal Extension

Construction of the WWTF would be on privately owned property at the North Beal Extension site. Impacts to cultural resources are unlikely.

Alternative 3 - Hurlburt Field East Gate

The property near the Hurlburt Field East Gate is privately owned. No impacts to cultural resources are anticipated.

No-Action Alternative

The WWTF and RIBS would not be constructed. No impacts would occur

4.6 CHEMICAL MATERIALS AND HAZARDOUS MATERIALS/WASTE

A detailed assessment of chemical materials used in the WWTF process and for site maintenance is located in Appendix E.

Proposed Action Chemical Treatment

Site design for the Proposed Action incorporates "state of the art" effluent treatment and discharge by utilizing UV disinfection and RIBS for effluent dispersal. The use of UV disinfection significantly reduces the addition of chlorine products, which at levels exceeding established criteria could cause adverse environmental impacts. The Garnier's WWTP currently handles chemical materials following facility standard operating procedures (SOPs) and state

/federal regulatory guidelines. Chemicals used at the new replacement treatment facility during the treatment process should be stored in 55-gallon drums or 5-gallon containers and located on racks built over concrete floors that include state approved spill containment. SOPs and state/federal regulations for handling, transporting, and storing chemical materials for the Proposed Action must be followed to protect human health and the environment. The Secretary of the Air Force must approve storage and disposal of hazardous materials and waste in accordance with 10 USC 2692. Adverse impacts from the installation of the Proposed Action are not anticipated and could potentially reduce impacts to the environment.

Okaloosa County treats the sprayfield area with herbicides. Approximately 700 gallons were applied from February to June of 2002. A chemical analysis is presented in Appendix E. If county personnel follow product guidelines when applying herbicides, no adverse environmental impacts should be present from current or future use.

Installation Restoration Program Sites and Historical Bombing Range 4

There are no IRP sites located at the existing sprayfield. However, historical bombing Range 4 is located on the property (Figure 4-1). Range 4 was used for low altitude bombing and air-to-ground gunnery and rocket training during the 1940s and 1950s. The range area was ½ mile by 1 mile and had a range line of 1,200 feet and a foul line of 600 feet from the target. The range had 6 concrete gunnery target butts spaced 150 feet on centers. Line of fire was toward the target area in a general east to west direction (Law Engineering, 2001). Ordnance use reported was small arms gunnery ammunition of all types (.30 caliber, .50 caliber and 20 mm), small projectiles, unknown types of bombs and rocket warheads. The highest area of concentration was thought to be found around the target butt area with a lighter concentration at the 600-foot foul line to the target and behind the target impact area into the range safety fan area associated with the gunnery range (Law Engineering, 2001). There was previously no record of UXO clearance (Caldwell, 2002). Figure 4-1 shows the historical affected environment from UXO contamination.

Eglin UXO personnel completed a visual surface clearance on the area. No UXO was found exposed on the surface. A random subsurface sample survey of the entire parcel using a Schonstedt Magnetic Locator and a circuitous route resulted in the following: 1) Magnetic anomalies were noted in the area south of the road; 2) Magnetic anomalies noted in the area north of the primary entry road (from Timberlake Road in the vicinity of the target butts); 3) An intrusive survey was conducted. Subsurface hits near the target butts were excavated to determine if the object was UXO. All findings resulted in trash and debris from routine operation of the sprayfield (Holland, 2003). Since no UXO was found at this site, it is unlikely that adverse impacts from chemical materials would result.

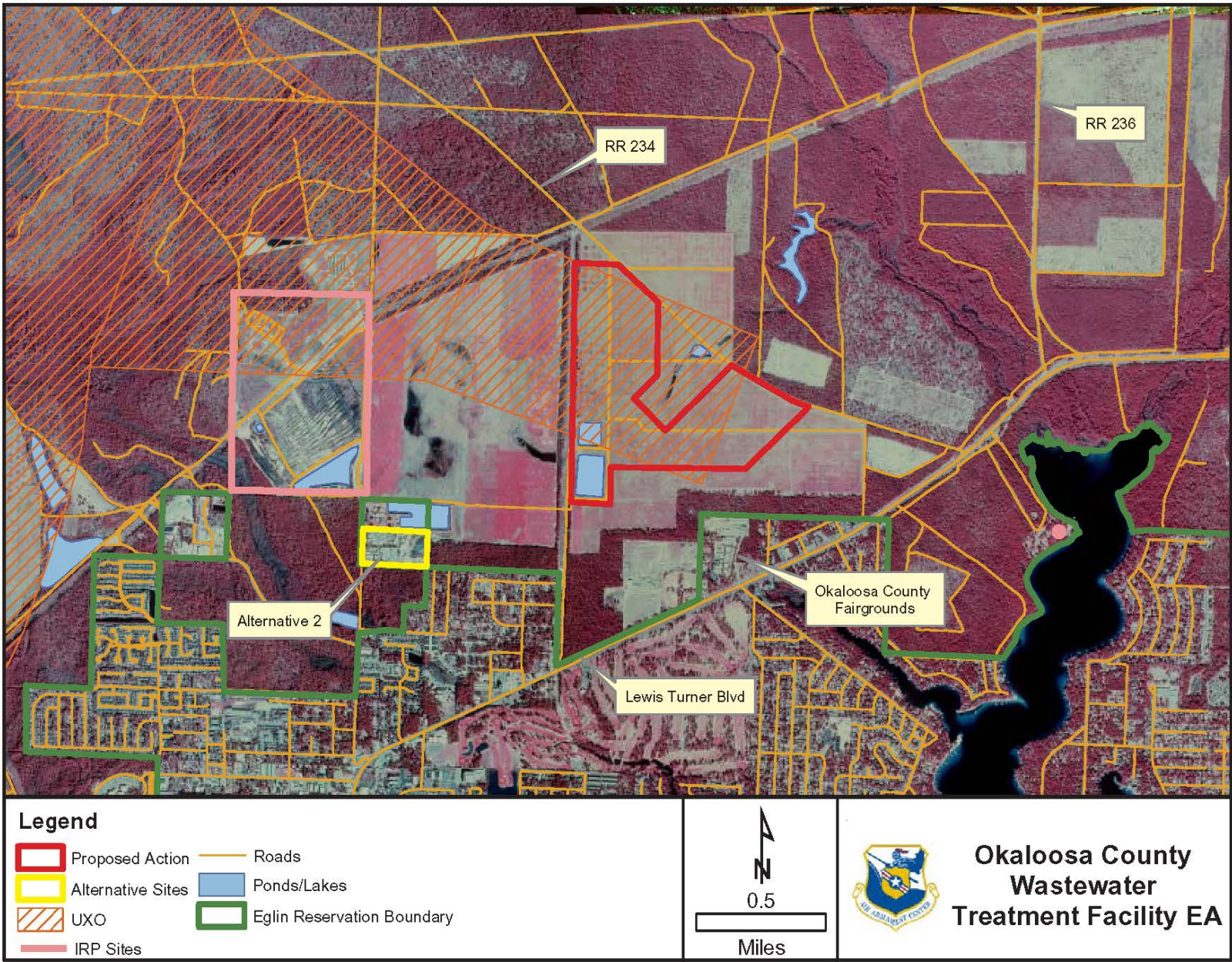


Figure 4-1. Legacy Bombing Range 4

Perchlorate

Perchlorate has been used for many years as a major component in solid fuel for rockets and missiles. The highest potential for the release of perchlorate is during disposal of solid rocket motors (DOD, 2003). Primary exposure of individuals to perchlorate is from contaminated drinking water. Extremely high doses of perchlorate can affect metabolism, growth, and metabolism in the body and chronic exposures may lead to blood disorders. The levels of perchlorate found in drinking water are significantly lower than what has been found to cause adverse health effects (DOD, 2003). Although perchlorate has been detected in 23 states, most detections have occurred in the West and Southwest. No solid rocket fuels were used or processed on this range. It is unlikely that adverse impacts from perchlorate would result.

County Road Department Maintenance Facility and Mosquito Control Facility

From 1973 to 1978 the site contained a County Road Department (CRD) maintenance facility that included fuel storage tanks for road construction vehicles, a grease rack and truck maintenance facility, a truck washing facility, vehicle and equipment storage areas, a culvert pipe storage yard, a pavement and clay storage pile, used tire pile and office space, and a solid waste holding area (Law Engineering, 2001). The facility stored oil in 55-gallon waste oil drums. The waste oil drums were placed on concrete pads and removed monthly for processing.

In 1974, a portion of the CRD area housed a Mosquito Control District (MCD) facility. The facility held fuel tanks, pesticide storage tanks, a shop for distribution equipment, a vehicle storage area, and hay harvesting equipment. The MCD used several insecticides; however, Malathion was the predominant choice (97% in 1975). No significant pesticide spills were reported. The clay layer and compacted oyster shell layer present at the MCD was thought to have absorbed any small spills. The soil was then removed to prevent spread of potential contamination (Law Engineering, 2001).

Facilities were removed and buildings demolished in 1978. A site visit was conducted by AAC/EMSP and Okaloosa County Water and Sewer in December 1999, which revealed no visual indication of oil spills on the ground surface at the previous CRD land area (Law Engineering, 2001). An Environmental Baseline Survey (EBS) was conducted to assess potential contamination the CRM facility and MCD facility. Based on Phase II analyses (USAF, 2003), potentially contamination-producing activities that occurred at the project area between the early 1970s and 1980s did not result in lasting soil contamination of the underlying soil media. It does not appear that the activities on the Garnier's Sprayfield project area have contaminated the soil media of the property (or adjacent properties at levels above state standards).

The following recommendations were made as a result of the Phase II investigation:

- Soil contamination resulting from the historical activities at the Mosquito Control District, the Truck Washing and Maintenance Facility, and the underground storage tanks will not inhibit the redevelopment of the site into the proposed Wastewater Treatment Facility.
- Regulatory approvals and additional environmental investigations and/or remediation prior to the construction of the Wastewater Treatment Facility are not required.

Alternative 1 - Garnier's WWTF

Currently, 200 to 225 pounds of chlorine to disinfect effluent and 63 pounds of polymer for biosolids thickening are used daily at the Garnier's facility (Helms, 2002). Degreasers and deodorizers are added as needed. Facility expansion would require increased chemical use and storage at the facility. Chlorine is added to the effluent at a concentration of 0.2 mg/L and is dependent upon daily loads. Facility expansion would require increased chemical use. Chlorine use could be avoided for this alternative by conversion to UV disinfection. Current monitoring well data from the sprayfield is shown in Appendix D.

Discharge of treated effluent from the new facility would require an increase in sprayfield capacity. However, if facility SOPs and FDEP standards are followed for the storage and use of chemical materials and discharge of effluent, adverse impacts are not expected.

Alternative 2 - North Beal Extension

Potential impacts for Alternative 2 from chemical/hazardous materials generated from the WWTF are the same as Alternative 1.

Data regarding hazardous material and waste is not available for the North Beal Extension Site. There is a high probability that hazardous materials/wastes exist on the property based on visual observation of numerous buildings and waste piles that may harbor these materials.

Alternative 3 - Hurlburt Field East Gate

Chemical/hazardous materials would be stored and used to treat effluent at the facility once constructed. Potential impacts are the same as Alternative 1, Garnier's WWTF. There are currently no hazardous materials on the property at the Hurlburt Field East Gate Site.

No-Action Alternative

The WWTF and RIBS would not be constructed. Therefore, no impacts would occur.

4.7 SOCIOECONOMIC RESOURCES**Proposed Action - Garnier's WWTF**

As discussed in Chapter 3, a portion of the site is used for cattle grazing. If the Proposed Action were carried forward, the area would no longer be used for this activity. Thus, there would be some (small) socioeconomic impact resulting from the removal of this activity. However, there are no anticipated significant socioeconomic impacts associated with this Proposed Action. The drivers for the Proposed Action, including population increase and the county's need for the wastewater treatment facility and RIBS system illustrate the socioeconomic component of the need for the facility.

Alternative 1 - Garnier's WWTF

Both residential housing and an elementary school are near the facility. As there is minimal land available for expansion, there is the potential socioeconomic impact to the residential housing and elementary school in terms of decreased land values (due to proximity to the expanded facility) and increased congestion in the area. As this area lacks any expanse of open-space, any future expansion of the wastewater treatment facility would be restricted. In the future, this may indicate further county expenditures for re-siting. It is assumed that expansion and upgrade at the Garnier's WWTF would be less costly than the Proposed Action; however, this benefit may decrease over time, given other potential impacts. Therefore, expansion and upgrade activities at the Garnier's WWTF (Alternative 1) may have adverse socioeconomic consequences.

Alternative 2 - North Beal Extension

The North Beal Extension site is a zoned industrial area currently used as a solid waste landfill. As this area is an existing waste disposal area, socioeconomic consequences are not anticipated at this site.

Alternative 3 - Hurlburt Field East Gate

A church and residential housing are within close proximity to the Hurlburt Field East Gate site. It is anticipated that purchasing of these areas would be costly to the county, and thus this alternative may be cost-prohibitive. Additionally, as with Garnier's WWTF (Alternative 1), there is the potential for socioeconomic impact to the residential housing and elementary school in terms of decreased land values (due to proximity to the expanded facility) and increased congestion in the area. Therefore, adverse socioeconomic impacts may occur.

No-Action Alternative

Construction of the WWTF and RIBS would not take place. Therefore, the county's need for a WWTF and for RIBS would not be addressed. Socioeconomically, this may have impacts on the area as populations continue to increase and wastewater treatment is required. Increased loadings to the existing Garnier's Sprayfield would put the system under considerable strain and the resulting impact would jeopardize the economic health of South Okaloosa County.

4.8 ENVIRONMENTAL JUSTICE

Environmental Justice impacts are defined as disproportionately adverse health effects on low income or minority populations. An environmental justice analysis requires identification of minority and low-income populations, as is done here, and analysis of whether the Proposed Action and alternative would have a disproportionately high and adverse effect on those populations. Analysis includes a review of (a) the demographic characteristics of the populations affected when compared to the general population, (b) potential impacts identified in other portions of this document (e.g., hazardous waste generation), and (c) the location and significance of those effects (i.e., hazardous waste migrations).

Proposed Action - Existing County Sprayfield

No potential impacts to the public, including low income or minority populations, are anticipated. As a result, there would be no disproportionately adverse health effects on low income or minority populations. Figure 4-2 shows that there are no Communities of Comparison (COCs) for this environmental justice analysis. No environmental justice impacts are anticipated.

Alternative 1 - Garnier's WWTF

Both residential housing and an elementary school are near the facility. Figure 4-2 shows COCs for the environmental justice analysis. As shown in this figure, communities to the west are in close proximity to the alternative action location. Minority or impoverished communities (defined as those communities where more than 30 percent of the population falls below the poverty line) are found immediately adjacent to this action location. Under this alternative, environmental justice impacts are anticipated. Selection of this alternative would require implementation of mitigative actions to prevent environmental justice impacts.

Alternative 2 - North Beal Extension

Same as the Proposed Action.

Alternative 3 - Hurlburt Field East Gate

Figure 4-2 shows COCs for the environmental justice analysis. As shown in this figure, minority communities surround the site. Minority or impoverished communities (defined as those communities where more than 30 percent of the population falls below the poverty line) are found immediately adjacent to this action location. Under this alternative, environmental justice impacts are anticipated. Selection of this alternative would require implementation of mitigative actions to prevent environmental justice impacts.

No-Action Alternative

Construction would not be conducted. Therefore, no impacts would occur.

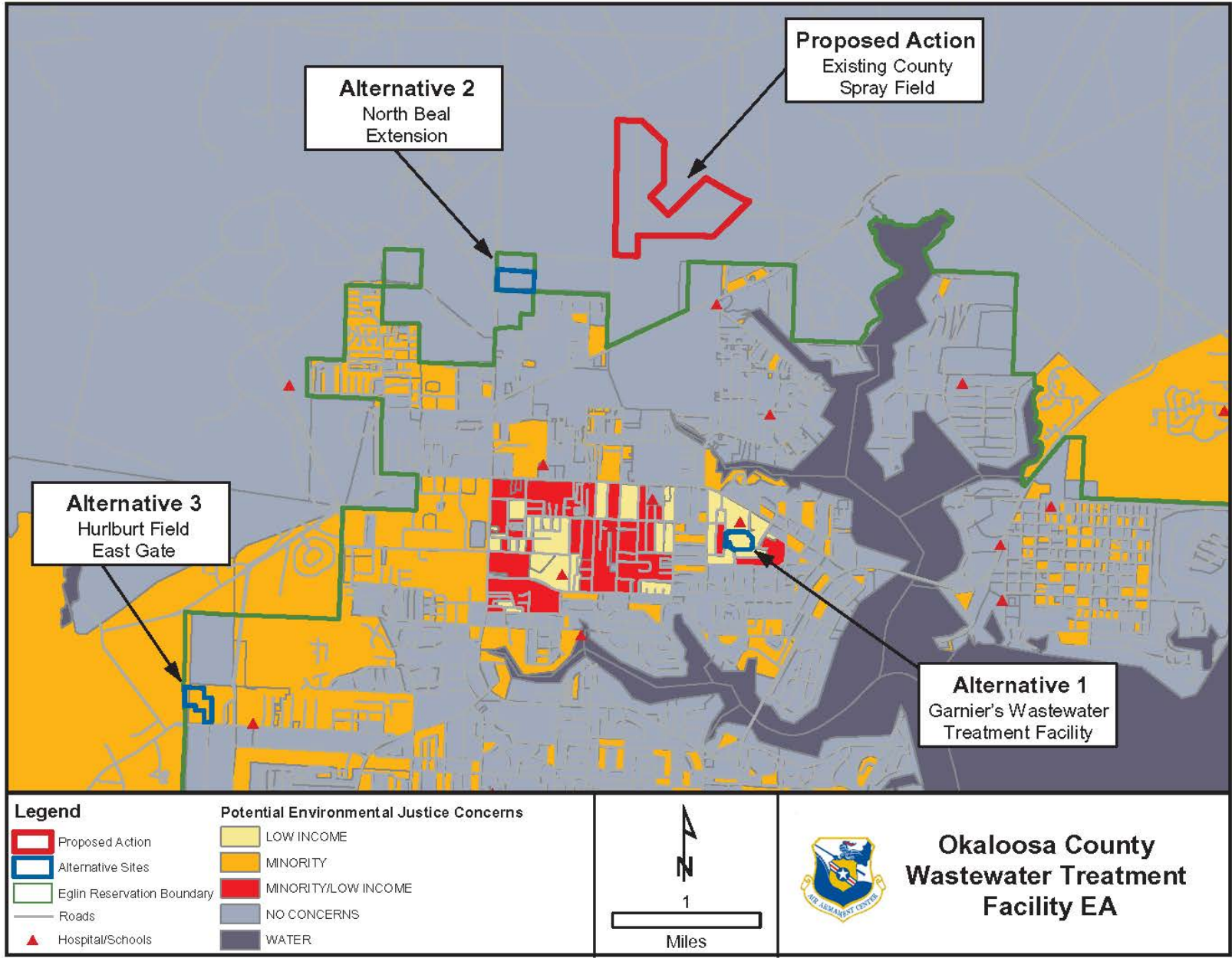


Figure 4-2. Communities of Comparison

4.9 SAFETY

Proposed Action - Existing County Sprayfield

Eglin UXO personnel completed a visual surface clearance on the area. No UXO was found exposed on the surface. A random subsurface sample survey of the entire parcel using a Schonstedt Magnetic Locator and a circuitous route resulted in the following: 1) Magnetic anomalies were noted in the area south of the road; 2) Magnetic anomalies noted in the area north of the primary entry road (from Timberlake Road in the vicinity of the target butts); 3) An intrusive survey was conducted. Subsurface hits near the target butts were excavated to determine if the object was UXO. All findings resulted in trash and debris from routine operation of the sprayfield (Holland, 2003). Should contractors encounter UXO during ground-breaking activities, Okaloosa County must be notified, as the County would be responsible for securing the means for UXO removal and disposal (i.e., hire a contractor). Proper disposal procedures would be followed according to Eglin AFB requirements.

The Federal Aviation Administration (FAA, 1997) recommends a distance of five statute miles from approach or departure airspace for wildlife attractants that may cause hazardous wildlife movement into or across approach or departure airspace. It was determined that Eglin and Hurlburt airfields are within 5 statute miles of the proposed action site. However, the site is not within either airfields approach or departure corridors (Figure 4-3). Hurlburt Field Flight Safety has no BASH related issues with the proposed action (Fogel, 2004).

Additionally, the U.S. Air Force BASH Team stated that it should be possible to operate RIBS without increasing local bird/wildlife hazards to aviation safety if the following measures are taken (Windler, 2002):

- Do not allow standing water to remain more than 24 hours after a basin is filled.
- Keep basins clear of emerging vegetation.
- To the extent possible, do not locate RIBS directly under local traffic patterns.
- The lease agreement would be worded to require the county to regularly monitor bird/wildlife activity at the RIBS and to take action to reduce any BASH problems that develop.
- The county should be required to accept responsibility for remediation of any BASH hazards that may arise from the installation of the RIBS to include any harassment, funding, or National Environmental Policy Act (NEPA) action that may be required to accomplish this task.
- The Eglin Bird/Wildlife Aircraft Strike Hazard BASH program should regularly monitor bird/wildlife hazards at the wastewater treatment facility and address them at the Bird Hazard Working Group (BHWG) meetings. The BHWG should recommend actions to be taken as necessary if any bird/wildlife activity developed due to the RIBS.

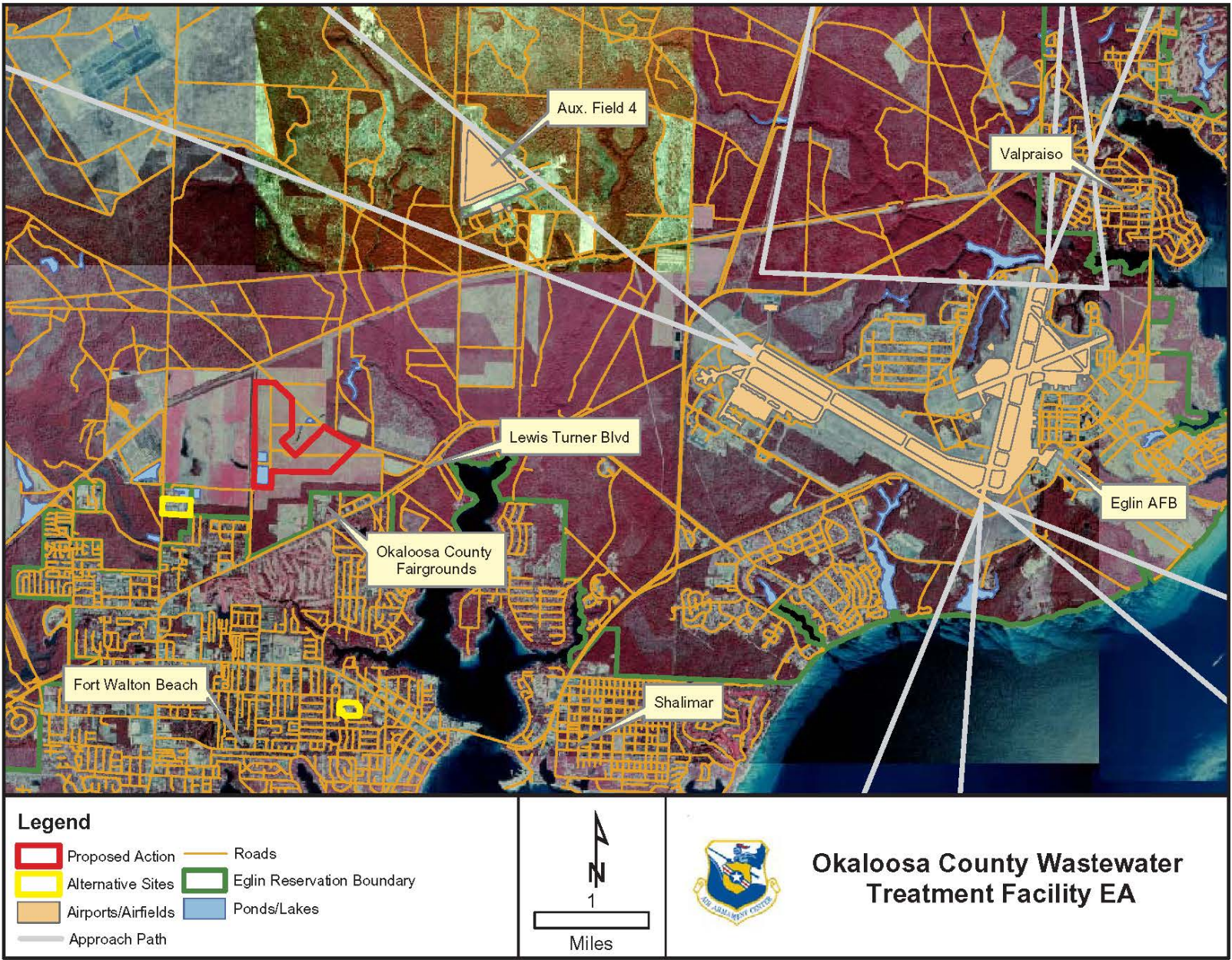


Figure 4-3. Bird/Wildlife Aircraft Strike Hazard

The FAA recommends the project proponent notify the appropriate regional office. The proponent may submit FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other appropriate documentation of the action as notification. No impacts to safety of personnel operating aircraft at Eglin or Hurlburt airfields are anticipated should the proponent follow the mitigations outlined above.

Alternative 1 - Garnier's WWTF

No impacts from the expansion of Garnier's WWTF are expected.

Alternative 2 - North Beal Extension

No impacts would occur at the North Beal Extension site.

Alternative 3 - Hurlburt Field East Gate

The FAA recommends that new wastewater facilities be sited a minimum of distance of five statute miles from approach or departure airspace due to the tendency for these facilities to attract wildlife, especially birds (FAA, 1997). A minimum distance of 5,000 feet away is recommended for airports that serve piston-powered aircraft, and 10,000 feet away from turbine-powered aircraft. Alternative 3 is not located within approach or departure airspace but does fall within the 5,000-foot and 10,000-foot considerations for aircraft. The FAA discourages new facilities that fall within the 5,000-foot and 10,000-foot distances and requests notification of plans to construct new wastewater treatment facilities near airports as early as possible in the siting and development process. The FAA recommends the project proponent notify the appropriate regional office. The proponent may submit FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other appropriate documentation of the action as notification. No impacts would occur at the Hurlburt Field East Gate site.

No-Action Alternative

Construction would not be conducted. Therefore, no impacts would occur.

4.10 CUMULATIVE IMPACTS

Cumulative Impacts

According to Council on Environmental Quality (CEQ) regulations, cumulative impact analysis in an environmental assessment should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7).

Cumulative effects may occur when there is a relationship between a Proposed Action and other actions expected to occur in a similar location or during a similar time period. This relationship may or may not be obvious. Actions overlapping with or in close proximity to the Proposed

Action can reasonably be expected to have more potential for cumulative effects on “shared resources” than actions that may be geographically separated. Similarly, actions that coincide temporally will tend to offer a higher potential for cumulative effects.

Past and Present Actions Relevant to the Proposed Action and Alternative

No other actions, either past or present, in or near the existing sprayfield site, were found to be relevant to the Proposed Action or Alternatives (e.g., large developments or construction projects).

Reasonably Foreseeable Future Actions

Reasonably foreseeable future development relevant to the Proposed Action or Alternatives may occur. The surrounding area has a potential growth rate projected at 3.9 percent per year (Blackshear, 2004) and the population growth in Okaloosa County is expected to grow from approximately 17,000 to 19,000 from 2005 to 2010 (University of Florida, Bureau of Economic and Business Research, 2002). Single Family housing start ups are projected to increase from 800 in 2005 to 1,100 in 2010 (University of Florida, Bureau of Economic and Business Research, 2002). Military family housing is expected to be constructed from 2005 to 2015 and depending upon project site selection, may increase use WWTF use. A flow capacity analysis report has shown that the WWTF capacity at the existing plant will be equaled or exceeded within five years due to population growth.

Santa Rosa County proposes to lease approximately 328 acres of U.S. Air Force (USAF) property for the purpose of constructing and operating a reclaimed water RIB system. The proposed RIB system would be constructed to receive and distribute highly treated reclaimed wastewater from the three utilities operating in South Santa Rosa County, Florida. These utilities are the Navarre Beach Water and Sewer (NNBWS), the Holley Navarre Water System (HNWS), and the South Santa Rosa Utilities (SSRU). The reclaimed wastewater will be pumped (piped) from these utility companies to the RIB system, where it would filter down from the infiltration basin to the surficial aquifer beneath the site.

The proposed site is located on Eglin Air Force Base property west of State Road (SR) 87 and south of Range Road 726. A buffer distance of no less than 500 feet (ft) would be maintained from SR 87, and a buffer distance of no less than 10,000 ft from the north-south runway of Choctaw Air Field would be maintained. Of the 328 acres, 200 acres would be a phased development as demand for wastewater disposal arose. Initially, Phase I (40 acres) would be constructed; then Phase II (90 acres); and then finally Phase III (70 acres). The remaining 128 acres would be set aside as a contingency area that may be required in the event a regulatory review by the Florida Department of Environmental Protection (FDEP) determined the need for an additional area. Access to facilities and infiltration basins would be by 15-foot-wide gravel base roads. A 2-acre Operation Compound consisting of a combined office and an equipment storage and maintenance shed surrounded by a chain link fence would be constructed to support maintenance activities. Manpower maintenance work schedules would be normal daylight duty hours.

A series of RIBs would be constructed on the site in phases over a 20-year period. This construction would enable a recycling of up to 7 million gallons per day (mgd) of highly treated reclaimed wastewater generated by the South Santa Rosa County utilities. Santa Rosa County

anticipates that the project would be developed in three phases. Each phase would be constructed as necessary to meet the region's growing effluent disposal needs. Approximate date planned for implementation is scheduled to begin in 2005.

Okaloosa County currently does not have plans to expand the acreage requested for the proposed WWTF (20 acres) and RIBS (235 acres) used for effluent disposal. Any required expansion of the WWTF could take place on the Proposed Action site, and should not occur until the next 10 or more years, unless growth in the service area for this facility, occurs faster than projected. The last expansion at the current Garniers WWTF, occurred in 1986 and was a 1.5 MGD expansion. The proposed plant to be built will be an expansion of 3.1 MGD of the current capacity. Any necessary expansion may require additional effluent disposal expansion, or increase in the RIBS. Should this occur, Okaloosa County would then have to obtain additional acreage through Eglin AFB, but should not exceed the total area currently being used for spray irrigation at the site. Also, future plans by Eglin to provide off-base housing near this facility, could provide an additional effluent disposal location, through reclaimed water for residential irrigation.

A reclaimed water system is a possible future addition to the county's wastewater disposal program, through coordination with Eglin, as an alternative for future off-base housing (Crews, 2004). Okaloosa County has no current plans or location to provide reclaimed water to customers of its system (Crews, 2004). However, The Northwest Florida Water Management District, who regulates and permits potable water pumping and consumption of the OCWS water system, strongly encourages the use of reclaimed water for irrigation purposes in its consumptive use permits.

Analysis of Cumulative Impacts

Reasonably foreseeable future development relevant to the Proposed Action or Alternatives may occur in the area. Area growth and development are expected to increase 3.9% per year (Blackshear, 2004). The Proposed Action allows for treatment of wastewater flows up to 9.6 MGD. Construction of the WWTF and RIBs would negate negative cumulative impacts due to area development and ensuing exceeded WWTF capacities for Okaloosa County. Reclaimed water may be a potential beneficial impact for the County and Eglin AFB military housing areas if implemented in the future. Beneficial cumulative impacts from reclaimed water include the conservation of potable water resources and a reduction in quantity of wastewater discharged to RIBs.

4.11 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and Irretrievable Commitment of Resources

NEPA requires that environmental analysis includes identification of any irreversible and irretrievable commitments of resources that will be involved in the Proposed Action should it be implemented. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource such as energy and minerals that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot

be restored as a result of the action, such as extinction of a threatened or endangered species or the disturbance of a cultural site.

Proposed and Alternative Actions

For the Proposed Action and Alternatives, most resource commitments are neither irreversible nor irretrievable. Okaloosa County has stated reclaimed water from the treatment plant effluent is a consideration for the future. This proposal has not been developed but would result in potential beneficial impacts to water resources.

Groundwater quality at the sprayfield site should be improved. Although no chemical parameters have exceeded FDEP standards, nitrates have approached the standard of 10mg/L at some well locations. The proposed plant would achieve the 60% reduction in total plant effluent nitrogen through the addition of a biological nutrient removal (BNR) stage. This stage promotes denitrification, effectively reducing the total nitrogen in plant effluent. With the existing WWTF nutrient removal (essentially nitrogen) is accomplished through sprayfield application and crop uptake (Petrey, 2003). Further reduction of nitrates may occur after the treated effluent is disposed through the RIBS.

To monitor groundwater, wells will remain in operation for a period of time determined by FDEP permitting engineers (Helms, 2004a). FDEP Compliance and Enforcement has placed Okaloosa County as the responsible party for the groundwater over the period of time it would take for the groundwater to reach the furthest point away from the site (Helms, 2004a). Okaloosa County estimates that groundwater monitoring wells would remain active for at least two to three years (Helms, 2004a). Once it has been determined that the monitoring wells can be closed, they will be closed in accordance with Northwest Florida Water Management District (NFWFMD) requirements which stipulate that closure will be performed by a licensed well contractor. Closure will be guided by the rules set forth in Chapter 40A-3 of the Florida Administrative Code (FAC).

Spills and the resultant impact to soils and groundwater are not anticipated. Chemicals used at the new replacement treatment facility during the treatment process should be stored in 55-gallon drums or 5-gallon containers and located on racks built over concrete floors that include state approved spill containment. SOPs and state/federal regulations for handling, transporting, and storing chemical materials for the Proposed Action must be followed to protect human health and the environment. The Secretary of the Air Force must approve storage and disposal of hazardous materials and waste in accordance with 10 USC 2692.

The 255 acre parcel for the proposed WWTF and RIBS resides within, and replaces, a 676 acre effluent sprayfield that has been leased to Okaloosa County since 1972. The RIBS concept provides a more efficient use of land in the disposal of waste water effluent. This unoccupied sprayfield has served well, since 1972, as a buffer between the Eglin Test Range and the expanding population growth within this northwest Florida county.

There would be no significant impact to any species population, essential fish habitat, or commercial fishery. As such, this action is not expected to significantly decrease the availability of these resources.

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5. PLANS, PERMITS, AND MANAGEMENT REQUIREMENTS

The following is a list of plan, permit, and management requirements associated with the Proposed Action. The need for these requirements were identified by the environmental analysis process in this environmental assessment and were developed through cooperation between the proponent and interested parties involved in the Proposed Action. These requirements are, therefore, to be considered as part of the Proposed Action and would be implemented through the Proposed Action's initiation.

Plans

- Site Design Plan
- Storm Water Pollution Prevention Plan

Permits

- Storm Water Facility Design and Construction Permit
- Generic Permit for Storm Water Discharge from Construction Activities that Disturb One or More Acres of Land (National Pollutant Discharge Elimination System [NPDES] Permit)
- Base Civil Engineering Work Clearance Request, AF Form 103, 19940801 (EF-V3)

Notification Requirements

The USEPA requires any operator proposing a new or expanded waste disposal operation within five statute miles of a runway end to notify the appropriate FAA Regional Airports Division Office and the airport operator of the proposal (40 CFR 258, *Criteria for Municipal Solid Waste Landfills*, section 258.10, *Airport Safety*). The FAA recommends the project proponent notify the appropriate regional office. The proponent may submit FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other appropriate documentation of the action as notification.

Management Requirements

Soils/Erosion

Where appropriate, BMPs, including the use of silt screens and certified weed-free hay bales, would be initiated during installation of the WWTF and RIBS. The facility and nine RIBS parcels could potentially disturb approximately 255.51 acres of soil. An NPDES construction permit would be required as more than one acre of soil surface would be disturbed.

Water and Wetland Resources

Groundwater flows in a general southerly direction from the proposed site; an additional monitoring location south of the proposed site may provide a more accurate assessment of contaminant transport from effluent disposal.

Plans, Permits, and Management Requirements

Okaloosa County is responsible for well closure in accordance with Northwest Florida Water Management District (NFWMD) requirements which stipulate that closure will be performed by a licensed well contractor as guided by the rules set forth in Chapter 40A-3 of the Florida Administrative Code (FAC).

Chemical Materials and Hazardous Materials/Waste

Standard operating procedures and state/federal regulations for handling, transporting, and storing chemical materials used during the Proposed Action must be followed to protect human health and the environment. Effluent discharge must meet FDEP water quality standards.

Okaloosa County must submit a request and obtain a waiver from The Secretary of the Air Force for storage of hazardous materials and disposal of hazardous waste in accordance with 10 USC 2692.

Safety

The Federal Aviation Administration (FAA, 1997) recommends a distance of five statute miles from approach or departure airspace for wildlife attractants that may cause hazardous wildlife movement into or across approach or departure airspace. The FAA recommends the project proponent notify the appropriate regional office. The proponent may submit FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other appropriate documentation of the action as notification.

The U.S. Air Force BASH Team stated that it should be possible to operate RIBS without increasing local bird/wildlife hazards to aviation safety if the following measures are taken (Windler, 2002):

- Do not allow standing water to remain more than 24 hours after a basin is filled.
- Keep basins clear of emerging vegetation.
- To the extent possible, do not locate RIBS directly under local traffic patterns.
- The lease agreement would be worded to require the county to regularly monitor bird/wildlife activity at the RIBS and to take action to reduce any BASH problems that develop.
- The county should be required to accept responsibility for remediation of any BASH hazards that may arise from the installation of the RIBS to include any harassment, funding, or National Environmental Policy Act (NEPA) action that may be required to accomplish this task.
- The Eglin Bird/Wildlife Aircraft Strike Hazard BASH program should regularly monitor bird/wildlife hazards at the wastewater treatment facility and address them at the Bird Hazard Working Group (BHWG) meetings. The BHWG should recommend actions to be taken as necessary if any bird/wildlife activity developed due to the RIBS.

6. LIST OF PREPARERS

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION (SAIC)

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Name/Qualifications	Contribution	Experience
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Kathryn Tucker Environmental Toxicologist M.S. Biological Sciences (Toxicology) B.S. Environmental Health Sciences	Project Manager, Author	9 years environmental science
James Garrison Professional Engineer M.E. Environmental Engineering B.S. Agricultural Engineering	Author	25 years environmental experience
Stephanie Hiers Environmental Scientist M.S. Conservation Ecology B.S. Biology	Author	5 years environmental science
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List of Preparers

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7. LIST OF CONTACTS

Mr. Phil Arnett

Okaloosa County Water and Sewer

Purpose of Contact: WWTF effluent treatment water quality standards and monitoring information.

Mr. Henry Caldwell

AAC/SEU

Purpose of Contact: Legacy UXO range at county sprayfield

Mr. Joey Crews

Okaloosa County Water and Sewer

Purpose of Contact: Information regarding Garnier's WWTF

Mr. Rick Helms

Okaloosa County Water and Sewer

Purpose of Contact: Information regarding chemical material storage and handling at Garnier's WWTF. RIBS maintenance.

Mr. David Holland

46 TW/TSRS

Purpose of Contact: UXO sprayfield site survey

Mr. Bob Miller

AAC/EMSN, Eglin AFB, FL

Purpose of Contact: Biological/ecological resource concerns at Preferred Alternative Site

Mr. Max Mobley, P.E.

Polyengineering of Florida, Inc.

Purpose of Contact: Nitrate concentrations in groundwater and RIBS treatment efficiency

Mr. Ross Mitchell

Florida Department of Environmental Protection

Purpose of Contact: Permit/regulatory status of Alternative 2 (North Beal Extension) Site

Mr. Roy Petrey, P.E.

Polyengineering of Florida, Inc.

Purpose of Contact: WWTF and RIBS site design and RIBS description. Site photos from Alternative Action sites. Biological/ecological resource concerns at all sites, potential for standing water and birds with RIBS at Preferred Alternative Site. Need for Proposed Action and associated schedule.

List of Contacts

Mr. Phillip Pruitt

Hurlburt Field

Purpose of Contact: Biological information on Hurlburt Field near Alternative 3 (Hurlburt Field East Gate) site

Ms. Lynn Shreve

AAC/EMH, Eglin AFB, FL

Purpose of Contact: Cultural resource concerns at the Preferred Alternative Site

Major Peter Windler

USAF Bird/Wildlife Aircraft Strike Hazard (BASH) Team, Kirtland AFB, NM

Purpose of Contact: BASH concerns at Preferred Alternative Site

Mr. Walt Monteith

Purpose of Contact: Confirmation that existing sprayfield site would not fall within future or current mission safety footprints.

Major Todd Fogel

16 SOW/SEF, Hurlburt Field, FL

Purpose of Contact: Statement that Hurlburt Field has no BASH related issues.

8. REFERENCES AND APPLICABLE DOCUMENTS

- Alley, W. M., T. E. Reilly, and O. L. Franke, 1999. Sustain Thomas E. Reilly. Sustainability of Ground Water Resources. U.S. Geological Survey Circular 1186. Denver.
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References and Applicable Documents

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APPENDIX A
FDEP CORRESPONDENCE

Mar 27 03 12:22p AAC EMC
UCWS/DIRECTOR'S OFFICE ID:904+651-7193

8508827675 P. 2
MAY 30 '02 13:09 No. 002 P.01

8-D-1-3



Jeb Bush
Governor

Department of Environmental Protection

Northwest District
160 Governmental Center
Pensacola Florida X501-5794

David B. Struhs
Secretary

May 23, 2002

RECEIVED
MAY 28 2002

Mr. Robert J. Arnold
Eglin AFB Encroachment Committee
101 West D Avenue, Suite 222
Eglin AFS, Florida 32542-5492

Dear Mr. Arnold:

The Department is advised that, with respect to the rapid infiltration basins proposed by Okaloosa County to be located within the boundaries of the Federal Reservation also known as Eglin Air Force Base, you are in need of certain assurances from the Department relating to operation of the facility before a lease agreement with the County can be executed. The Department hereby agrees to exercise its enforcement discretion and not to make any claim or take any enforcement action upon the United States of America for injury to the State's lands or natural resources or for violations, including violations of any permits issued by the Department to either the County or the United States, due to the County's operation of the proposed facility; where the United States has not caused or contributed to such damages or violations of Department statutes, rules or permit conditions. This statement is not intended to waive the state's sovereign immunity or to waive any claim or action against the County or parties other than the United States of America.

Please be further advised that a standard requirement of the proposed permit is that the Department must have reasonable site access to the facility during construction and operation for inspection purposes. It is my understanding that this condition is acceptable to the Air Force.

Please call David Morris at (850) 5958300 or Betsy Hewitt in our Office of General Counsel at (850) 9219935, should you have any questions.

Sincerely,

Mary Jean Von
Director of District Management

MJY/hdm

cc: Donald R. Fitch, Environmental Attorney, Eglin AFB
Colonel Michael R. Newberry
Betsy Hewitt, Office of General Counsel
Chris Holfey, County Manager, Okaloosa
Neal Rogers, P.E., CH2M Hill

Post-it® Fax Note 7671		Date 5/30/02	# of pages 1
To John Wolfe	From Jeff Littlell		
Co./Dept. Eglin	Co. Okaloosa County Water		
Phone # 850-882-7677	Phone #		
Fax # 850-882-7675	Fax #		



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR ARMAMENT CENTER (AFMC)
EGLIN AIR FORCE BASE, FLORIDA

AAC/EMC
592 Range Road
Eglin AFB FL 32542

RECEIVED

07 JUN 2002

JUN 11 2002

Mr. Scott Sheplak
2600 Blair Stone
MS 5505
Tallahassee FL 32399-2400

BUREAU OF AIR POLLUTION

Dear Mr. Sheplak

Eglin AFB has conceptually approved a request from the Okaloosa County Board of Commissioners for a 25-year lease of 255.51 acres for the construction, operation, and maintenance of a wastewater treatment facility and associated rapid infiltration basin system to be located within the boundaries of the Eglin Reservation. The design capacity of the facility would be greater than 6.5 million gallons per day (MGD).

Since Eglin is classified as a major source for hazardous air pollutants, the proposed treatment facility would normally be subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP): Publicly Owned Treatment Works (greater than 5MGD) if owned/operated by Eglin. Eglin's only involvement in this project is leasing land to Okaloosa County for the proposed treatment facility site; no waste water generated by Eglin will be treated by the proposed facility. In addition, Mary Jean Yon, Director of District Management, FDEP Northwest District, stated in a letter (May 23, 2002) to Mr. Robert J. Arnold, Eglin AFB Encroachment Committee, regarding this project that "The Department hereby agrees to exercise its enforcement discretion and not to make any claim or take any enforcement action upon the United States of America for injury to the State's lands or natural resources or for violations, including violations of any permits issued by the department to either the county or the United States, due to the county's operation of the proposed facility".

Therefore, we request that the proposed waste water treatment plant be treated as separate and apart from Eglin AFB and strictly owned and operated by Okaloosa County. Additionally, we ask that Eglin AFB neither be made subject to the Publicly Owned Treatment Works NESHAP nor have to change/revise its Title V permit with regards to this project.

If you have any questions, please contact Mr. John Wolfe at (850) 882-7677.

Sincerely

A handwritten signature in cursive script that reads "Thomas M. Paris".

THOMAS M. PARIS, GS-14
Chief, Environmental Compliance

EMCE



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

June 12, 2002

Thomas M. Paris, GS-14
Chief, Environmental Compliance
AAC/EMC
Department of the Air Force
592 Range Road
Eglin AFB, FL 32542

Re: Title V Source Applicability
Proposed POTW

Dear Mr. Paris:

The department received your letter dated June 7, 2002 regarding Title V source applicability to the proposed POTW on the Eglin AFB reservation.

As stated in 40 CFR 63.2, the definition of a *major source* of hazardous air pollutants means "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants, unless the Administrator establishes a lesser quantity, or in the case of radionuclides, different criteria from those specified in this sentence."

Since Okaloosa County's proposed wastewater treatment facility will not be under the control of the Eglin AFB, there is no reason to include it in the Title V permit for Eglin AFB.

If you should have any further questions, please contact Cindy Phillips at 850/921-9534 or me at 850/921-9532.

Sincerely,

Scott M. Sheplak, P.E.
Administrator
Title V Section
Bureau of Air Regulation

w/enclosure

copy to: Cindy Phillips, P.E., FDEP-BAR
Sandra Veazey, FDEP-NWD

"More Protection, Less Process"

Printed on recycled paper.

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APPENDIX B

WWTF AND RIBS PROCESS

WASTEWATER TREATMENT

The wastewater enters the treatment facility through the collection system. Hydro sieve or bar screens remove the larger debris (such as wood, plastics, etc.) and then the wastewater flows through a channel allowing dense inorganic material, such as sand and grit, to settle. This material is then removed by using a specially designed collection system where it is washed and hauled to a landfill in North Santa Rosa County for disposal.

The wastewater then flows into a mixing basin where it comes into contact with the biological organisms that do the work in wastewater treatment. These organisms consume the organic matter, and while this process takes place, the biological mass grows. Part of this wastewater then flows to settling tanks (clarifiers) where the biosolids settle to the bottom of the tank for removal and the clear liquid on the surface is treated by either chlorination or ultraviolet disinfection. It is then land applied for further natural purification.

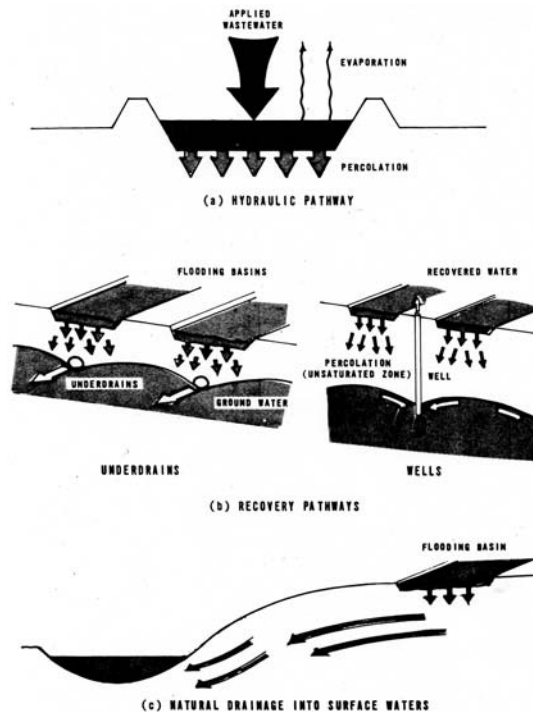
The biosolids that settle to the bottom of the clarifier are then pumped back to the beginning of the process where they are mixed with the incoming raw wastewater and a partial mix of internal recycled biosolids from the mixing process. This flow then goes into an oxygen free zone known as an anoxic zone where nitrogen is removed biologically before it enters the mixing basin. This is a continually recurring process. Chemicals such as caustic soda may also be added at this point to remove phosphorus if required by FDEP permit regulations.

Throughout this process, two by-products are produced. One is the treated water also known as effluent. The effluent is disposed of through a series of RIBS (Rapid Infiltration Basins). For this project there will be nine RIBS. Each RIB will be graded to produce a three-foot berm around the perimeter. The RIBS allow for the rapid infiltration of the treated wastewater through the soils, which add further natural treatment to the effluent before it eventually reaches the sand and gravel aquifer.

The second by-product is sludge or biosolids. The proposed biosolids process will carry a Mean Cell Residence Time, or sludge age of no more than 20 to 30 days, therefore eliminating the need for digesters. The biosolids that are excess to the process are dewatered by one of two means: running the biosolids through a belt filter press machine where they are mixed with a polymer, dewatered to 16 percent to 18 percent solid and land applied through a contract with Crook Creek Farms in north Okaloosa County, or processed through a centrifuge device, where again they are mixed with polymer and dewatered to 20 percent to 22 percent solid. The same method of land application applies to the centrifuge operation.

Chemical Processes

Chemical storage at the facility depends on the chemicals that are used and their toxicity. The system uses caustic soda as a neutralizing agent and discharges to natural atmosphere. If sodium hypochlorite is used, it is generated on site. Chemicals used in the treatment process are normally stored in 55-gallon drums or 5-gallon containers and are on racks built over concrete floors that include state approved spill containment.

**WWTP Aeration Basins****Rapid Infiltration Basin****Rapid Infiltration Basin System Water Flow Schematic**

APPENDIX C

SITE PHOTOS



Sprayfield



Maintenance Shed

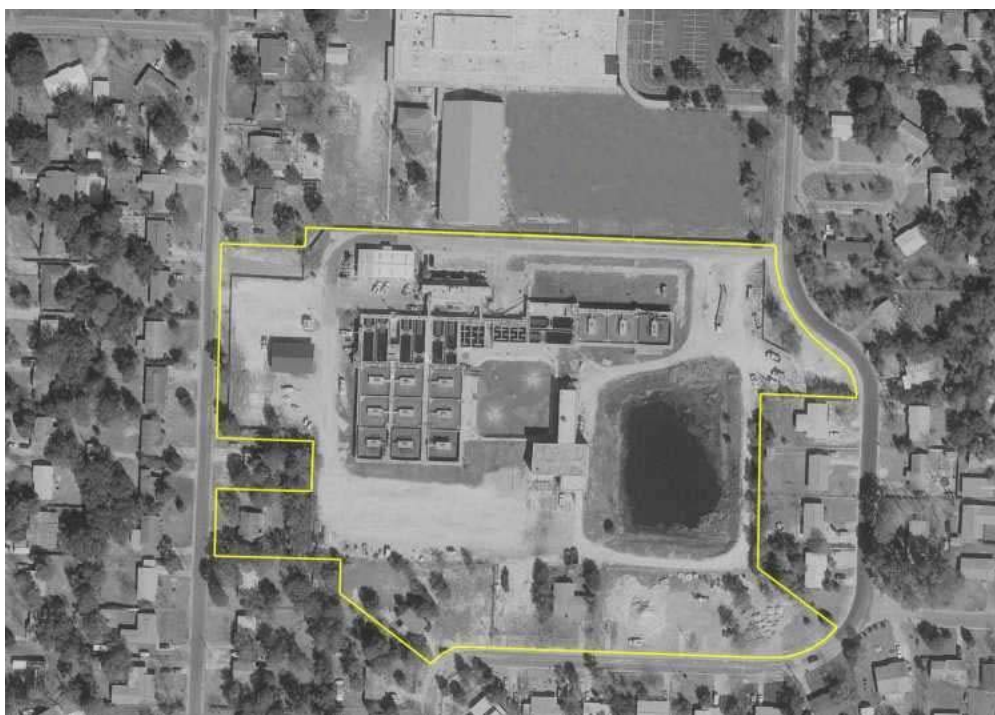


Holding Basin Showing Waterfowl



Holding Basin

**Proposed Action
Existing Sprayfield Site**



Aerial Photo Garnier's WWTF



Garnier's WWTF Showing Close Proximity of Elementary School

**Alternative 1
Garnier's WWTF**



Aerial Photo North Beal Extension Site



Solid Waste Landfill



Solid Waste Materials – 20 foot piles

**Alternative 2
North Beal Extension
Solid Waste Landfill**



Aerial Photo Hurlburt East Gate Site



Site Showing Church



Site Showing Wetland



Site Showing Shrub/Forest

**Alternative 3
Hurlburt Field East Gate Site**

APPENDIX D

GARNIER'S WWTF MONITORING DATA – COUNTY SPRAYFIELD AND TIMBER LAKE

Garnier's WWTF Sprayfield Monitoring Well Data – Existing Sprayfield Site

	Drinking Water Standards*	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7	Well 8	Well 9	Well 10	Well 11
1st Quarter 2002												
Water Level (MSL)	Not Applicable	37.3	27.3	15.1	18.8	37.8	43.6	42.8	50.4	42.7	47.8	47.0
Nitrate mg/L	10	3.94	9.20	6.85	6.43	8.49	8.67	6.49	3.50	0.231	3.231	4.96
T.D.S. mg/L	500	149	399	328	330	386	299	216	353	29.0	350	369
Arsenic µg/L	50	<1.00	<1.00	<1.00	<1.00	<1.00	1.76	<1.00	<1.00	<1.00	<1.00	<1.00
Cadmium mg/L	0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chloride mg/L	250	36.9	116	109	95.1	113	95.1	67.9	65.9	11.2	105	93.1
Chromium µg/L	100	<1.00	36.5	9.49	9.93	5.45	22.4	3.26	4.61	<1.00	1.69	2.02
Lead µg/L	15	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00
Fecal Coliforms	<1,000 monthly average*	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml
pH	6.5-8.5	6.03	6.36	6.36	6.43	6.58	6.40	6.48	6.02	5.20	6.03	6.47
Sulfate	250	19.4	34.3	15.0	25.1	22.5	24.2	12.4	<1.00	<1.00	19.5	24.2
2nd Quarter 2002												
Water Level (MSL)	Not Applicable	37.2	27.0	14.5	18.2	37.8	43.0	43.4	50.6	42.6	48.2	48.4
Nitrate mg/L	10	4.04	7.92	6.08	6.54	7.09	6.17	7.29	5.18	0.265	3.65	3.34
T.D.S. mg/L	500	178	366	346	328	334	307	221	321	15.0	333	334
Arsenic µg/L	50	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Cadmium mg/L	0.005	<0.0001	0.0001	0.0002	<0.0001	<0.0001	<0.0001	0.0001	0.0001	<0.0001	<0.0001	0.0001
Chloride mg/L	250	49.2	95.2	94.2	87.3	93.2	75.7	31.0	103	<1.00	107	85.4
Chromium µg/L	100	1.32	3.50	42.4	6.06	<1.00	11.3	1.21	1.80	<1.00	2.94	2.65
Lead µg/L	15	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00
Fecal Coliforms	<1,000 monthly average*	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml
pH	6.5-8.5	5.97	6.36	6.33	6.43	6.47	6.22	6.34	6.09	4.85	5.94	6.38
Sulfate	250	20.7	23.6	20.4	19.7	23.1	18.8	11.3	26.9	2.28	30.4	24.3

Garnier's WWTF Sprayfield Monitoring Well Data – Existing Sprayfield Site Cont'd

	Drinking Water Standards*	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7	Well 8	Well 9	Well 10	Well 11
3rd Quarter 2002												
Water Level (MSL)	Not Applicable	43.9	26.9	14.5	18.1	38.1	43.2	43.4	50.0	42.5	47.0	48.0
Nitrate mg/L	10	4.11	7.58	6.99	7.00	5.85	5.70	6.72	5.18	0.244	4.10	4.31
T.D.S. mg/L	500	193	374	359	344	365	356	238	343	27.0	364	351
Arsenic µg/L	50	3.14	2.51	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Cadmium mg/L	0.005	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Chloride mg/L	250	47.5	101	99.0	97.0	97.0	91.1	57.4	105	5.95	115	89.1
Chromium µg/L	100	29.3	2.51	9.93	35.5	1.14	8.25	1.80	2.66	<1.00	<1.00	3.22
Lead µg/L	15	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Fecal Coliforms	<1,000 monthly average*	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml	<1 in 100 ml
pH	6.5-8.5	5.89	6.29	6.47	6.43	6.49	6.34	6.37	6.17	5.02	5.95	6.38
Sulfate	250	19.6	24.8	23.4	23.0	20.5	19.0	13.4	27.1	1.61	30.0	25.0

*Nor exceed 1,000 in 20% of samples examined during any month, nor exceed 2,400 at any time using Most Probable Number (MPN) or Membrane Filter (MF) counts.

Source: Chapter 62-550, Florida Administrative Code, Drinking Water Standards, Monitoring and Reporting. www.dep.state.fl.us/water/drinkingwater/rules.htm

Garnier's WWTF Sprayfield Monitoring Data – Timber Lake

Yearly Average		1998	1999	2000	2001	2002
	Surface Water Quality Criteria Class III					
Temp (°C)	Not Applicable	21.1	21.5	11.2	20.4	21.7
pH	Shall not vary below or above one unit natural background	7.21	7.18	7.07	7.15	7.02
Nitrate mg/L	No data	3.61	2.49	4.69	4.51	4.71
Chlorides mg/L	No data	72.3	65.7	48.6	84.1	91.5
Sulfates mg/L	No data	13.2	16.9	26.3	22.6	17
T.D.S. mg/L	No data	214	266	156	286	324
Arsenic µg/L	≤ 50	<1.00	1.70	<1.00	<1.00	<1.00
Cadmium mg/L	$\leq e^{(0.7852[\ln H]-3.49)}$	0.0002	0.0004	0.0001	0.0001	<0.0001
Chromium µ/L	(trivalent) $\leq e^{(0.819[\ln H]+0.6848)}$ (hexavalent) ≤ 11	2.78	2.05	1.73	1.10	<1.00
Lead µg/L	$< e^{(1.273[\ln H]-4.705)}$	2.68	<3.00	<3.00	<3.00	<3.00
Fecal Coliforms No./100	<1,000 monthly average*	6	9	<1	3	14
Conductivity uS/cm	Shall not be increased > 50% above background or to 1275, whichever is greater	456	471	339	552	582

"ln H" means the natural logarithm of total hardness expressed as milligrams per liter of calcium carbonate (CaCO₃). For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is < 25 mg/L and set at 400 mg/L if actual hardness is > 400 mg/L.

*Nor exceed 1,000 in 20% of samples examined during any month, nor exceed 2,400 at any time using Most Probable Number (MPN) or Membrane Filter (MF) counts.

Sources: Criteria for Surface Water Quality Classifications 62-302.530: Class III, Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife www.dep.state.fl.us/legal/legaldocuments/rules/shared/62-302t.pdf

Timber Lake Data from Okaloosa County Water and Sewer

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APPENDIX E

CHEMICAL ASSESSMENT

Environmental Fate and Transport, Health Effects, and Exposure Assessment for Chemical Materials

Material	Environmental Fate and Transport	Health Effects	Exposure Assessment
Disinfectants			
Potassium Permanganate	Potassium permanganate is a soluble caustic alkali that oxidizes organic molecules in water. In this process, organisms and bacteria are killed, which makes it an effective anti-microbial, anti-parasitic, and molluscicidal compound. The potassium permanganate eventually converts into manganese dioxide that is removed from water by changes in chemical composition and filtration.	Eye contact with product may result in burns or irreversible damage to eyes and skin. If inhaled can cause lung and respiratory system damage. When ingested, severe burns to the gastrointestinal system may occur. Overexposure may cause damage to all body tissues, lungs and the central nervous system (Harcros, 2001). TLV = 0.2 mg/m3	May react violently with organics or other materials resulting in an explosion or fire. Contact with strong reducing agents, which include hydrogen, hydrazine, sulfides and nitrites should be avoided.
Sodium Hypochlorite - (10%) + Sodium Hydroxide (3%)	Aquatic: In the case of a solid, anhydrous sodium hydroxide spill on soil, ground water pollution may occur if precipitation occurs prior to cleanup. Precipitation will dissolve some of the solid (with much heat given off) and create an aqueous solution of sodium hydroxide, which then would be able to infiltrate the soil. However, prediction of the concentration and properties of the solution produced would be difficult (TOXNET, 2002).	Contact with eyes can cause severe irritation, eye damage, or blindness. May cause irritation or burns to skin. If inhaled may result in sneezing, irritation, or when exposure is prolonged, pneumonia, lung damage or death. Ingestion results in severe irritation, tissue ulceration, gastrointestinal damage, circulatory collapse, convulsions and coma. Has not been shown to be carcinogenic. Chlorine TWA/TLV = 0.5 ppm; Sodium Hydroxide TWA/TLV = 2 mg/m3. Sodium hypochlorite is toxic to aquatic biota (Harcros, 2002).	May react violently with organics or other materials. Maximum use level in potable water is 250 mg/L (Harcros, 2002).
Degreasers, Deodorants, Flocculants			
SELIG 75-SX-89 Degreaser-Aliphatic Naphtha (30-40%); D-Limonene (60-70%)	Environmental fate and transport data is not available for this product. However, petroleum solvents such as naphtha released to the environment undergo weathering processes such as evaporation, leaching, chemical oxidation, and microbial degradation. Weathering is dependant upon environmental conditions.	Acute effects of the product may produce mucous membrane irritation, particularly of the eye. Vapors may cause mild central nervous system depression. May cause sensitivity reactions. Long term or prolonged exposure may produce irreversible lung damage, skin irritation, infection and dermatitis. The product is not carcinogenic (Selig, 2002).	Adverse health effects would not be expected under recommended conditions of use (diluted) so long as prescribed safety precautions are practiced.

Environmental Fate and Transport, Health Effects, and Exposure Assessment for Chemical Materials Cont'd

Material	Environmental Fate and Transport	Health Effects	Exposure Assessment
Degreasers, Deodorants, Flocculants Cont'd			
2551 RPD Deodorant - Isopropanol (10%)	Completely soluble in water, and upon release 80% volatilizes into the atmosphere.	Overexposure may cause mild irritation to skin and eyes. May be harmful if inhaled or swallowed. Threshold limit value (TLV) = 400 parts per million (ppm) (Hill, 1991).	The majority of this product will be dispersed into the atmosphere. It exhibits a pleasant citrus odor and should not cause adverse health effects when used following label instructions for application.
PK 003 Odor Neutralizer and Conditioner	This product consists of biodegradable plant extracts with minerals and trace elements; therefore it should break down in the environment and not persist.	PK 003 is not a hazardous product. Toxicological information is not available.	This deodorizer contains biodegradable plant extracts with minerals and trace elements. No adverse impacts should occur.
Klear Flocc 1245/8120 Petroleum distillate (20-24%); Citric Acid (2-3%)	Environmental fate and transport data is not available for this product. However, petroleum products that are released to the environment undergo processes such as evaporation, leaching, chemical oxidation, and microbial degradation. Weathering (breakdown) is dependant upon environmental conditions.	Prolonged or repeated skin contact tends to remove skin oils potentially causing irritation or dermatitis. Direct contact may cause eye irritation. Overexposure to high vapor concentration > 700 ppm can irritate eyes, respiratory tract and cause headache, dizziness, drowsiness, central nervous system effects including death (Specialized Polymers, Inc., 2001). Rat acute oral LD50 = >5,000 mg/Kg; Rat dermal LD50 = 2,000 mg/Kg. Rat 4 hour inhalation LC50 = > 20 mg/L (Specialized Polymers, Inc., 2001). Citric acid has a rat oral LD50 value of 11,700 mg/Kg. This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm (Specialized Polymers, Inc., 2001). Klear Flocc 1245: Marine copepod 48-hour LC50 = 2.4 mg/L; Marine algae 72-hour EC50 = 4.7 mg/L (No aquatic LC50 available for Klear Flocc 8120).	Adverse health effects are not anticipated if standard operating procedures are followed during handling.

Environmental Fate and Transport, Health Effects, and Exposure Assessment for Chemical Materials Cont'd

Material	Environmental Fate and Transport	Health Effects	Exposure Assessment
Herbicides			
Roundup-Glyphosate	<p>Glyphosate is most often applied as a spray of the isopropylamine salt and is removed from the atmosphere by gravitational settling. After glyphosate is applied to forests, fields, and other land by spraying, it is strongly adsorbed to soil, remains in the upper soil layers, and has a low propensity for leaching. Iron and aluminum clays and organic matter adsorbed more glyphosate than sodium and calcium clays and was readily bound to kaolinite, illite, bentonite, charcoal and muck but not to ethyl cellulose (USEPA, 2002). Glyphosate readily and completely biodegrades in soil even under low temperature conditions. Its average half-life in soil is about 60 days. Biodegradation in foliage and litter is somewhat faster. In field studies, residues are often found the following year. Glyphosate may enter aquatic systems through accidental spraying, spray drift, or surface runoff. It dissipates rapidly from the water column as a result of adsorption and possibly biodegradation. The half-life in water is a few days. Sediment is the primary sink for glyphosate. After spraying, glyphosate levels in sediment rise and then decline to low levels in a few months. Due to its ionic state in water, glyphosate would not be expected to volatilize from water or soil. Based on its water solubility, glyphosate is not expected to bioconcentrate in aquatic organisms. It is minimally retained and rapidly eliminated in fish, birds, and mammals. The bioconcentration factor of in fish following a 10-14 day exposure period was 0.2 to 0.3 (USEPA, 2002). Occupational workers and home gardeners may be exposed to glyphosate by inhalation and dermal contact during spraying, mixing, and cleanup. They may also be exposed by touching soil and plants to which glyphosate was applied. Occupational exposure may also occur during glyphosate's manufacture, transport storage, and disposal.</p>	<p>Drinking water levels considered "safe" for short-term exposures: For a 10-kg (22 lb.) child consuming 1 liter of water per day, up to a ten-day exposure to 20 mg/L or up to a 7-year exposure to 1 mg/L. Glyphosate has the potential to cause adverse health effects following long-term exposures at levels above maximum contaminant levels (MCL) include kidney damage, reproductive effects.</p> <p>This substance may cause moderate eye irritation and gastrointestinal tract irritation if swallowed. Occupational exposure has not been reported to cause significant adverse health effects (Monsanto, 1999). Rat dermal LD50 = >5gm/Kg; Rat Oral LD50 = >5g/Kg; Rat inhalation LC50 = >10 mg/L. Glyphosate is not considered to be a carcinogenic, teratogenic, nor a reproductive toxin (Monsanto, 1999).</p>	<p>Adverse impacts would be avoided if exposures remain below established MCLs. Adherence to product labeling should mitigate adverse environmental impacts.</p>

Environmental Fate and Transport, Health Effects, and Exposure Assessment for Chemical Materials Cont'd

Material	Environmental Fate and Transport	Health Effects	Exposure Assessment
Herbicides Cont'd			
Weedmaster – Dimethylamine salt of dicamba (12.4%); Dimethylamine salt of 2,4-dichlorophenoxyacetic acid (2,4-D) (35.7%)	Volatilization plays a minor role in the breakdown and precipitation of 2,4-D. The small amount of 2,4-D in air breaks down in the sun in ~2 days or dissolves into water droplets and is transported to the earth's surface by wet deposition (Walter, 2002). Residues of 2,4-D can enter ponds and streams by direct application, runoff, or accidental drift. Movement in soil and presence in groundwater is dependent upon soil type, with coarse-grain sandy soil having low organic content expected to leach 2,4-D to groundwater. 2,4-D may break down in water is 26 days, depending upon photolysis and suspended organic matter. Major routes of 2,4-D breakdown appear to result from microbial and photo degradation (Walter, 2002).	Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin. Excessive exposure to 2,4-D may cause liver, kidney, gastrointestinal, and muscular effects. Excessive dietary levels of 2,4-D caused toxic effects in rats in a reproductive test. Rat oral LD50 = 1150 mg/kg; Rabbit Dermal LD50 = 2000 mg/kg Bluegill Sunfish and Rainbow Trout, static 96-hour LC50 = 1000mg/L; Daphnia magna, static 48-hour EC50 = 1800 mg/L (BASF, 2002)	Adherence to product labeling regarding handling and dispersal is imperative to avoid potential health and environmental impacts. The product should not be applied near streams, ponds, or standing water.

ANSI/NSF – American Standards Institute/NSF International
 PEL – Permissible Exposure Limit
 TLV – Threshold Limit Value
 TWA – Time Weighted Average
 LC50 – Lethal Concentration at which 50% mortality is shown
 LD50 – Lethal Dose at which 50% mortality is shown

APPENDIX F

PUBLIC REVIEW PROCESS AND AGENCY COORDINATION

SATURDAY, JUNE 14, 2003 Daily News PAGE B9

Public Notification

In compliance with the National Environmental Policy Act, Eglin Air Force Base announces the availability of the draft Environmental Assessment and draft Finding of No Significant Impact (FONSI) for RCS 02-444, Okaloosa County Wastewater Treatment Facility, and the following Programmatic Environmental Assessments (PEA) and their draft Findings of No Significant Impacts (FONSI) for RCS 99-148, Test Areas B-71 and B-82, RCS 99-145, Electromagnetic Radiation, and RCS 99-144, Range Roads, at Eglin Air Force Base, Florida for public review and comment.

The proposed action of RCS 02-444, Okaloosa County Wastewater Treatment Facility draft Environmental Assessment, is to provide a 25-year lease to the existing county sprayfield site located on Roberts Road. The county has requested the use of 255 presently-leased acres for the construction, operation, and maintenance of a wastewater treatment facility and associated Rapid Infiltration Basin System.

The proposed action of RCS 99-148, Test Areas B-71 and B-82 draft Programmatic Environmental Assessment, is for the 46th Test Wing commander to establish an authorized level of mission activity based on an anticipated maximum usage. The preferred alternative includes authorizing levels of air to surface missions up to 2,400% (from approximately 1 mission per year to 2 missions per month) of the baseline, and increasing static ground testing 900% (from approximately 4 missions per year to 36 missions per year), and surface-to-surface testing 300% from 25 missions per year to 75 missions per year.

The proposed action of RCS 99-145, Electromagnetic Radiation draft Programmatic Environmental Assessment, is for the 46th Test Wing commander to establish an authorized level of mission activity based on an anticipated maximum usage. The preferred alternative includes authorizing the current levels of activity, plus the relocation, addition or upgrade of EMR emitter systems.

The proposed action of RCS 99-144, Range Roads draft Programmatic Environmental Assessment, is for the 46th Test Wing commander to establish a formalized Range Road Management Program to guide the repair and maintenance of existing roads. The preferred alternative would include the systematic closure of range roads deemed non-critical to the Military Test and Training, Emergency Response, and Natural Resources missions.

Your comments on this draft EA and draft PEAs are requested. Letters or other written or oral comments provided may be published in the final documents. As required by law, comments will be addressed in the final documents and made available to the public. Any personal information provided will be used only to identify your desire to make a statement during the public comment period or to fulfill requests for copies of the associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the documents. However, only the names and respective comments of respondent individuals will be disclosed. Personal home addresses and phone numbers will not be published in the final documents.

Copies of the draft Environmental Assessment and draft Programmatic Environmental Assessments and their respective draft Findings of No Significant Impact (FONSI) may be reviewed at the following locations:

RCS 02-444, Okaloosa County Wastewater Treatment Facility draft Environmental Assessment - Fort Walton Beach Public Library, 185 SE Miracle Strip Parkway, Fort Walton Beach.

RCS 99-148, Test Areas B-71 and B-82 draft Programmatic Environmental Assessment - Fort Walton Beach Public Library, 185 SE Miracle Strip Parkway, Fort Walton Beach.

RCS 99-145, Electromagnetic Radiation draft Programmatic Environmental Assessment - Fort Walton Beach Public Library, 185 SE Miracle Strip Parkway, Fort Walton Beach; Navarre Library, 185 SE Miracle Strip Parkway, Fort Walton Beach; Navarre Library, 8484 James M. Harvell Rd., Navarre.

RCS 99-144, Range Roads draft Programmatic Environmental Assessment - Fort Walton Beach Public Library, 185 SE Miracle Strip Parkway, Fort Walton Beach; Navarre Library, 8484 James M. Harvell Rd., Navarre; Niceville Library, 206 Partin Dr., Niceville; Robert L. F. Sikes Library, 1445 Commerce Drive, Crestview.

All copies will be available for review from June 14 through June 28, 2003. Comments must be received by July 1, 2003.

For more information or to comment on these proposed actions, contact: Mr. Mike Spaitis, AAC/EM-PAV, 501 De Leon St., Suite 101, Eglin AFB, Florida 32542-5133 or email: spaitism@eglin.af.mil. Tel: (850) 882-2878, Fax: (850) 882-3761.

125304

Northwest Florida Daily News
Notice

RCS 02-444
Okaloosa County Wastewater Treatment Facility

A public notice was published in the *Northwest Florida Daily News* on June 14, 2003 to disclose completion of the Draft EA, selection of the preferred alternative, and request comments during the 15-day pre-decisional comment period.

The 15-day comment period ended on June 28, 2003, with the comments required to this office not later than July 1, 2003.

No comments were received during this period.

//signed//
Mike Spaits
Public Information Specialist



Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

July 7, 2003

Ms. Elizabeth B. Vanta
Chief, Environmental Analysis Branch
501 DeLeon Street, Suite 101
Eglin Air Force Base, Florida 32399-3000

RE: U.S. Air Force - Draft Environmental Assessment - Proposed Construction of Okaloosa County Wastewater Treatment Facility and Rapid Infiltration Basin System on 255.51-Acre Leased Site - Eglin AFB - Okaloosa County, Florida
SAI: FL200305152121C

Dear Ms. Vanta:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, and the Coastal Zone Management Act, 16 U.S.C. §1451-1464, as amended, has coordinated the review of the above-referenced environmental assessment (EA).

The Department of Environmental Protection (Department) indicates the proposed project will require a Domestic Wastewater Permit from the Department's Northwest District Office, as well as a permit for stormwater management. If wetlands will be impacted, a Wetland Resource permit will also be required. The Air Force is advised continue close coordination with the District regarding permitting requirements.

The Department of State (DOS) notes that a cultural resources survey will be conducted to identify any significant archaeological and/or historic sites which may be located within the project area. The proposed project will have no effect on significant cultural resources, provided that the Air Force coordinates survey activities with DOS and avoids or mitigates any impacts to sites identified in the survey. Please refer to the enclosed DOS comments.

The referenced EA provides sufficient information for the state to evaluate the project's consistency with the Florida Coastal Management Program (FCMP), at this stage of project planning. The state has therefore determined that, at this stage, the proposed project is consistent with the FCMP. Because a federal consistency determination that addresses the project's compliance with the FCMP was not provided, the documents provided do not fully address the requirements of the CZMA and 15 CFR 930, Subpart C. Future documents prepared for this

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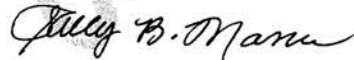
Ms. Elizabeth B. Vanta
July 7, 2003
Page Two

project and/or other proposed projects should comply with the CZMA and 15 CFR 930.39 (copy enclosed). The DEP Office of Intergovernmental Programs is available to assist you with this requirement, if needed.

All subsequent environmental documents prepared for the project must be reviewed to determine the project's continued consistency with the FCMP. The state's concurrence with the applicant's consistency determination will be based, in part, on the adequate resolution of the issues identified during this and subsequent reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting stage.

Thank you for the opportunity to review this project. If you have any questions regarding this letter, please contact Ms. Rosalyn Kilcollins at (850) 245-2163.

Sincerely,



Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/rk

Enclosures

cc: Janet Snyder Matthews, DOS

77160 Federal Register / Vol. 65, No. 237 / Friday, December 8, 2000 / Rules and Regulations

activities requiring a less extensive review period, provided that public participation requirements are met.

(c) *General consistency determinations.* In cases where Federal agencies will be performing repeated activity other than a development project (e.g., ongoing maintenance, waste disposal) which cumulatively has an effect upon any coastal use or resource, the Federal agency may develop a general consistency determination, thereby avoiding the necessity of issuing separate consistency determinations for each incremental action controlled by the major activity. A Federal agency may provide a State agency with a general consistency determination only in situations where the incremental actions are repetitive and do not affect any coastal use or resource when performed separately. A Federal agency and State agency may mutually agree on a general consistency determination for de minimis activities (see § 930.33(a)(3)) or any other repetitive activity or category of activity(ies). If a Federal agency issues a general consistency determination, it shall thereafter periodically consult with the State agency to discuss the manner in which the incremental actions are being undertaken.

(d) *Phased consistency determinations.* In cases where the Federal agency has sufficient information to determine the consistency of a proposed development project or other activity from planning to completion, the Federal agency shall provide the State agency with one consistency determination for the entire activity or development project. In cases where federal decisions related to a proposed development project or other activity will be made in phases based upon developing information that was not available at the time of the original consistency determination, with each subsequent phase subject to Federal agency discretion to implement alternative decisions based upon such information (e.g., planning, siting, and design decisions), a consistency determination will be required for each major decision. In cases of phased decisionmaking, Federal agencies shall ensure that the development project or other activity continues to be consistent to the maximum extent practicable with the management program.

(e) *National or regional consistency determinations.* (1) A Federal agency may provide States with consistency determinations for Federal agency activities that are national or regional in scope (e.g., rulemaking, national plans), and that affect any coastal use or resource of more than one State. Many

States share common coastal management issues and have similar enforceable policies, e.g., protection of a particular coastal resource. The Federal agency's national or regional consistency determination should, at a minimum, address the common denominator of these policies, i.e., the common coastal effects and management issues, and thereby address different States' policies with one discussion and determination. If a Federal agency decides not to use this section, it must issue consistency determinations to each State agency pursuant to § 930.39.

(2) Federal agency activities with coastal effects shall be consistent to the maximum extent practicable with the enforceable policies of each State's management program. Thus, the Federal agency's national or regional consistency determination shall contain sections that would apply to individual States to address coastal effects and enforceable policies unique to particular States, if common coastal effects and enforceable policies cannot be addressed under paragraph (e)(1). Early coordination with coastal States will enable the Federal agency to identify particular coastal management concerns and policies. In addition, the Federal agency could address the concerns of each affected State by providing for State conditions for the proposed activity. Further, the consistency determination could identify the coordination efforts and describe how the Federal agency responded to State agency concerns.

§ 930.37 Consistency determinations and National Environmental Policy Act (NEPA) requirements

A Federal agency may use its NEPA documents as a vehicle for its consistency determination or negative determination under this subpart. However, a Federal agency's federal consistency obligations under the Act are independent of those required under NEPA and are not necessarily fulfilled by the submission of a NEPA document. If a Federal agency includes its consistency determination or negative determination in a NEPA document, the Federal agency shall ensure that the NEPA document includes the information and adheres to the timeframes required by this subpart. Federal agencies and State agencies should mutually agree on how to best coordinate the requirements of NEPA and the Act.

§ 930.38 Consistency determinations for activities initiated prior to management program approval.

(a) A consistency determination is required for ongoing Federal agency activities other than development projects initiated prior to management program approval, which are governed by statutory authority under which the Federal agency retains discretion to reassess and modify the activity. In these cases the consistency determination must be made by the Federal agency at the earliest practicable time following management program approval, and the State agency must be provided with a consistency determination no later than 120 days after management program approval for ongoing activities which the State agency lists or identifies through monitoring as subject to consistency with the management program.

(b) A consistency determination is required for major, phased federal development project decisions described in § 930.36(d) which are made following management program approval and are related to development projects initiated prior to program approval. In making these new decisions, Federal agencies shall consider effects on any coastal use or resource not fully evaluated at the outset of the project. This provision shall not apply to phased federal decisions which were specifically described, considered and approved prior to management program approval (e.g., in a final environmental impact statement issued pursuant to NEPA).

§ 930.39 Content of a consistency determination.

(a) The consistency determination shall include a brief statement indicating whether the proposed activity will be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the management program. The statement must be based upon an evaluation of the relevant enforceable policies of the management program. A description of this evaluation shall be included in the consistency determination, or provided to the State agency simultaneously with the consistency determination if the evaluation is contained in another document. Where a Federal agency is aware, prior to its submission of its consistency determination, that its activity is not fully consistent with a management program's enforceable policies, the Federal agency shall describe in its consistency determination the legal authority that prohibits full consistency as required by

§ 930.32(a)(2). Where the Federal agency is not aware of any inconsistency until after submission of its consistency determination, the Federal agency shall submit its description of the legal authority that prohibits full consistency to the State agency as soon as possible, or before the end of the 90-day period described in § 930.36(b)(1). The consistency determination shall also include a detailed description of the activity, its associated facilities, and their coastal effects, and comprehensive data and information sufficient to support the Federal agency's consistency statement. The amount of detail in the evaluation of the enforceable policies, activity description and supporting information shall be commensurate with the expected coastal effects of the activity. The Federal agency may submit the necessary information in any manner it chooses so long as the requirements of this subpart are satisfied.

(b) Federal agencies shall be guided by the following in making their consistency determinations. The activity its effects on any coastal use or resource, associated facilities (e.g., proposed siting and construction of access road, connecting pipeline, support buildings, and the effects of the associated facilities (e.g., erosion, wetlands, beach access impacts), must all be consistent to the maximum extent practicable with the enforceable policies of the management program.

(c) In making their consistency determinations, Federal agencies shall ensure that their activities are consistent to the maximum extent practicable with the enforceable, policies of the management program. However, Federal agencies should give consideration to management program provisions which are in the nature of recommendations.

(d) When Federal agency standards are more restrictive than standards or requirements contained in the management program, the Federal agency may continue to apply its stricter standards. In such cases the Federal agency shall inform the State agency in the consistency determination of the statutory, regulatory or other basis for the application of the stricter standards.

(e) *State permit requirements.* Federal law, other than the CZMA, may require a Federal agency to obtain a State permit. Even when Federal agencies are not required to obtain State permits, Federal agencies shall still be consistent to the maximum extent practicable with the enforceable policies that are contained in such State permit programs that are part of a management program.

§ 930.40 Multiple Federal agency participation.

Whenever more than one Federal agency is involved in a Federal agency activity or its associated facilities affecting any coastal use or resource, or is involved in a group of Federal agency activities related to each other because of their geographic proximity, the Federal agencies may prepare one consistency determination for all the federal activities involved. In such cases, Federal agencies should consider joint preparation or lead agency development of the consistency determination. In either case, the consistency determination shall be transmitted to the State agency at least 90 days before final decisions are taken by any of the participating agencies and shall comply with the requirements of § 930.39.

§ 930.41 State agency response.

(a) A State agency shall inform the Federal agency of its concurrence with or objection to the Federal agency's consistency determination at the earliest practicable time, after providing for public participation in the State agency's review of the consistency determination. The Federal agency may presume State agency concurrence if the State agency's response is not received within 60 days from receipt of the Federal agency's consistency determination and supporting information. The 60-day review period begins when the State agency receives the consistency determination and supporting information required by § 930.39(a). If the information required by § 930.39(a) is not included with the determination, the State agency shall immediately notify the Federal agency that the 60-day review period has not begun, what information required by § 930.39(a) is missing, and that the 60-day review period will begin when the missing information is received by the State agency. If a Federal agency has submitted a consistency determination and information required by § 930.39(a), then the State agency shall not assert that the 60-day review period has not begun for failure to submit information that is in addition to that required by § 930.39(a).

(b) State agency concurrence shall not be presumed in cases where the State agency, within the 60-day period, requests an extension of time to review the matter. Federal agencies shall approve one request for an extension period of 15 days or less. In considering whether a longer or additional extension period is appropriate, the Federal agency should consider the magnitude and complexity of the information

contained in the consistency determination.

(c) Final Federal agency action shall not be taken sooner than 90 days from the receipt by the State agency of the consistency determination unless the State concurs or concurrence is presumed, pursuant to paragraphs (a) and (b), with the activity, or unless both the Federal agency and the State agency agree to an alternative period.

(d) *Time limits on concurrences.* A State agency cannot unilaterally place an expiration date on its concurrence. If a State agency believes that an expiration date is necessary, State and Federal agencies may agree to a time limit. If there is no agreement, later phases of, or modifications to, the activity that will have effects not evaluated at the time of the original consistency determination will require either a new consistency determination, a supplemental consistency determination under § 930.46, or a phased review under § 930.36(d) of this subpart.

(e) *State processing fees.* The Act does not require Federal agencies to pay State processing fees. State agencies shall not assess a Federal agency with a fee to process the Federal agency's consistency determination unless payment of such fees is required by other federal law or otherwise agreed to by the Federal agency and allowed by the Comptroller General of the United States. In no case may a State agency stay the consistency review period or base its objection on the failure of a Federal agency to pay a fee.

§ 930.42 Public participation.

(a) Management programs shall provide for public participation in the State agency's review of consistency determinations. Public participation, at a minimum, shall consist of public notice for the area(s) of the coastal zone likely to be affected by the activity, as determined by the State agency.

(b) *Timing of public notice.* States shall provide timely public notice after the consistency determination has been received by the State agency, except in cases where earlier public notice on the consistency determination by the Federal agency or the State agency meets the requirements of this section. A public comment period shall be provided by the State sufficient to give the public an opportunity to develop and provide comments on whether the project is consistent with management program enforceable policies and still allow the State agency to issue its concurrence or objection within the 60 day State response period.

EXAMPLE**Florida Coastal Management Plan****Proposed Action Check List – Negative Determination**

Statute	Consistency	Scope
Chapter 161 <i>Beach and Shore Preservation</i>	Not applicable to proposed activities.	Authorizes the Bureau of Beaches and Coastal Systems within the Department of Environmental Protection to regulate the construction on or seaward of the state's beaches.
Chapter 163, Part II <i>Growth Policy; County and Municipal Planning; Land Development Regulation</i>	Not applicable to proposed activities.	Requires local governments to prepare, adopt, and implement comprehensive plans that encourage the most appropriate use of land and natural resources in a manner consistent with the public interest.
Chapter 186 <i>State and Regional Planning</i>	Not applicable to proposed activities.	Details the state-level planning requirements. Requires the development of special statewide plans governing water use, land development, and transportation.
Chapter 252 <i>Emergency Management</i>	Not applicable to proposed activities.	Provides for the planning and implementation of the state's response to natural and manmade disasters, efforts to recover from natural and manmade disasters, and the mitigation of natural and manmade disasters.
Chapter 253 <i>State Lands</i>	Based on the EA analysis, the proposed action will have no effect on sovereign submerged lands. Concrete anchors will be placed in water depths of 50 to 60 feet. Concrete anchors will be used to secure the The maximum size of the concrete anchor is 30 x 30 x 30 inches. The total maximum bottom area impacted is 6.25 square feet at each location. The placement of the shallow water qualifies for a Consent of Use determination under section 273.77.	Addresses the state's administration of public lands and property of this state and provides direction regarding the acquisition, disposal and management of all state lands.
Chapter 258 <i>State Parks and Preserves</i>	Not applicable to proposed activities.	Addresses the administration and management of state parks and preserves.
Chapter 259 <i>Land Acquisition for Conservation or recreation</i>	Not applicable to proposed activities.	Authorizes acquisition of environmentally endangered lands and outdoor recreation lands.
Chapter 260 <i>Recreational Trails System</i>	Not applicable to proposed activities.	Authorizes the acquisition of land to create a recreational trails system and to facilitate the management of the system.
Chapter 267 <i>Historical Resources</i>	Not applicable to proposed activities	Addresses the management and preservation of the state's archaeological and historical resources.
Chapter 288 <i>Commercial Development and Capital Improvements</i>	Not applicable to proposed activities.	Provides the framework for promoting and developing the general business, trade, and tourism components of the state economy.
Chapter 334 <i>Transportation Administration</i>	Not applicable to proposed activities.	Addresses the state's policy concerning transportation administration.
Chapter 339 <i>Transportation Finance and Planning</i>	Not applicable to proposed activities.	Addresses the finance and planning needs of the state's transportation system.

Chapter 370 <i>Saltwater Fisheries</i>	Based on the EA analysis, the proposed action will have no impact on the state's marine fishery resources. The proposed action will have no effect on threatened or endangered species, will not destroy or adversely modify any critical habitat in accordance with the Endangered Species Act, and will not destroy or modify Essential Fish habitats in accordance with the Magnuson-Stevens Fishery Conservation and Management Act.	Addresses the management and protection of the State's saltwater fisheries.
Chapter 372 <i>Wildlife</i>	Not applicable to proposed activities.	Addresses the management of the wildlife resources of the state.
Chapter 373 <i>Water Resources</i>	Based on the EA analysis, the proposed action will have no impact on the water resources of the state. Placement of the shallow water structure will temporarily cause small amounts of turbidity that will dissipate quickly and will have no effect on coastal resources. The placement of the shallow water structure qualifies for a permit exemption under section 373.4145.	Addresses the state's policy concerning water resources.
Chapter 375 <i>Multipurpose Outdoor Recreation; Land Acquisition, Management, and Conservation</i>	Not applicable to proposed activities.	Develops a comprehensive multipurpose outdoor recreation plan to document recreational supply and demand, describe current recreational opportunities, estimate the need for additional recreational opportunities, and propose the means to meet the identified needs.
Chapter 376 <i>Pollutant Discharge Prevention and Removal</i>	Not applicable to proposed activities.	Regulates the transfer, storage, and transportation of pollutants, and the cleanup of pollutant discharges.
Chapter 377 <i>Energy Resources</i>	Not applicable to proposed activities.	Addresses the regulation, planning and development of the energy resources of the state.
Chapter 380 <i>Land and Water Management</i>	Not applicable to proposed activities.	Establishes land and water management policies to guide and coordinate local decisions relating to growth and development.
Chapter 381 <i>Public Health, General Provisions</i>	Not applicable to proposed activities.	Establishes public policy concerning the state's public health system.
Chapter 388 <i>Mosquito Control</i>	Not applicable to proposed activities.	Addresses the mosquito control effort in the state.
Chapter 403 <i>Environmental Control</i>	Not applicable to proposed activities.	Establishes public policy concerning environmental control in the state.
Chapter 582 <i>Soil and Water Conservation</i>	Not applicable to proposed activities.	Provides for the control and prevention of soil erosion.

(RA)



FLORIDA DEPARTMENT OF STATE

Glenda E. Hood

Secretary of State

DIVISION OF HISTORICAL RESOURCES

Ms. Lauren Milligan
 Director, Florida State Clearinghouse
 Florida Department of Environmental Protection
 3900 Commonwealth Boulevard, Mail Station 47
 Tallahassee, Florida 32399-3000

June 6, 2003

RE: DHR Project File Number: 2003-4394
 Received by DHR May 19, 2003 *SAK 6/6/03*
 SAI #: 200305152121C
 U.S. Department of Air Force – Draft Environmental Assessment for Construction,
 Operation and Maintenance of a Waste Water Treatment Facility and Associated
 Rapid Infiltration Base System
 Eglin Air Force Base, Okaloosa County

Dear Ms. Milligan:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992, and 36 C.F.R., Part 800: *Protection of Historic Properties*, Chapter 267, *Florida Statutes*, Florida's Coastal Management Program, and implementing state regulations, for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historical, architectural or archaeological value. The State Historic Preservation Officer is to advise and assist state and federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

We note that the project will have a cultural resource survey performed at the spray field site. We look forward to coordinating with the Eglin Air Force Base in the protection and preservation of significant cultural resources that may be affected by this project. Further investigations may be necessary. If these conditions are met, the project will be consistent with Section 106 of the *National Historic Preservation Act of 1966*, the historic preservation aspects of Florida's Coastal Management Program, and implementing state regulations.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, by electronic mail sedwards@dos.state.fl.us, or at 850-245-6333 or 800-847-7278.

Sincerely,

Janet Snyder Matthews, Deputy SHPO
 Janet Snyder Matthews, Ph.D., Director, and
 State Historic Preservation Officer

RECEIVED

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office
 (850) 245-6300 • FAX: 245-6435

☐ Archaeological Research
 (850) 245-6444 • FAX: 245-6436

☒ Historic Preservation
 (850) 245-6333 • FAX: 245-6437

☐ Historical Museums
 (850) 245-6400 • FAX: 245-6433

☐ Palm Beach Regional Office
 (561) 279-1475 • FAX: 279-1476

☐ St. Augustine Regional Office
 (904) 825-5045 • FAX: 825-5044

☐ Tampa Regional Office
 (813) 272-3843 • FAX: 272-2340

JUN 10 2003
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Florida

Department of Environmental Protection

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Project Information	
Project:	FL200305152121C
Comments Due:	June 14, 2003
Letter Due:	July 14, 2003
Description:	DEPARTMENT OF THE AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR OKALOOSA COUNTY WASTEWATER TREATMENT FACILITY AND ASSOCIATED RAPID INFILTRATION BASIN SYSTEM (RIBS) - EGLIN AIR FORCE BASE - OKALOOSA COUNTY, FLORIDA.
Keywords:	USAF-EA-OKALOOSA COUNTY WASTEWATER FACILITY-EGLIN AFB.
CFDA #:	12.200
Agency Comments:	
FT. WALTON BEACH - CITY OF FT. WALTON BEACH	
nc	
WEST FLORIDA RPC - WEST FLORIDA REGIONAL PLANNING COUNCIL	
nc	
OKALOOSA - OKALOOSA COUNTY	
No Final Comments Received	
ENVIRONMENTAL POLICY UNIT - OFFICE OF POLICY AND BUDGET, ENVIRONMENTAL POLICY UNIT	
nc	
COMMUNITY AFFAIRS - FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS	
Released Without Comment	
FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION	
No Final Comments Received	
STATE - FLORIDA DEPARTMENT OF STATE	
The State Historic Preservation Officer is to advise and assist state and federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects. See hard copy.	
TRANSPORTATION - FLORIDA DEPARTMENT OF TRANSPORTATION	
nc	
ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	
The Department's Northwest District is working closely with Okaloosa County in support of this project. Wastewater permits will be required. The County is advised to continue close coordination with the District during the scheduling, permitting and construction phases. RK	
NORTHWEST FLORIDA WMD - NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT	
nc	

For more information please contact the Clearinghouse Office at:

AGENCY CONTACT AND COORDINATOR (SCH)
 3900 COMMONWEALTH BOULEVARD MS-47
 TALLAHASSEE, FLORIDA 32399-3000
 TELEPHONE: (850) 245-2161
 FAX: (850) 245-2190

OK

COUNTY: OKALOOSA

DATE: 5/15/2003

COMMENTS DUE DATE: 6/14/2003

CLEARANCE DUE DATE: 7/14/2003

SAI#: FL200305152121C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS			
X ENVIRONMENTAL PROTECTION	NORTHWEST FLORIDA WMD	ENVIRONMENTAL POLICY UNIT	
FISH and WILDLIFE COMMISSION			
STATE			
TRANSPORTATION			

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- ☐ Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.
- X ☒ Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.
- ☐ Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.
- ☐ Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

DEPARTMENT OF AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR CONSTRUCTION - OPERATION - AND MAINTENANCE OF A WASTE WATER TREATMENT FACILITY AND ASSOCIATED RAPID INFILTRATION BASE SYSTEM - EGLIN AIR FORCE BASE - OKALOOSA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA Federal Consistency

- | | |
|---|--|
| <input type="checkbox"/> No Comment | <input type="checkbox"/> No Comment/Consistent |
| <input type="checkbox"/> Comment Attached | <input checked="" type="checkbox"/> Consistent/Comments Attached <i>online</i> |
| <input type="checkbox"/> Not Applicable | <input type="checkbox"/> Inconsistent/Comments Attached |
| | <input type="checkbox"/> Not Applicable |

From:

Division/Bureau: OS/01P
Reviewer: R. K. Collins
Date: 6/27/03

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
Project Review Form

TO: State Clearinghouse
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 47
Tallahassee, FL 32399-3000

DATE: May 29, 2003

SUBJECT: Project Review: Intergovernmental Coordination
Title: Dept. of the Air Force-Draft Environmental Assessment for
Construction-Operation-and-Maintenance of a Wastewater
Treatment Facility and Associated Rapid Infiltration Base System-
Eglin Air Force Base-Okaloosa County, FL
SAI #: FL200305152121C

The District has reviewed the subject application and attachments in accordance with its responsibilities and authority under the provisions of Chapter 373, Florida Statutes. As a result review, the District has the following responses:

ACTION

- ☒ No Comment.
- ☐ Supports the project.
- ☐ Objects to the project; explanation attached.
- ☐ Has no objection to the project; explanation optional.
- ☐ Cannot evaluate the project; explanation attached.
- ☐ Project requires a permit from the District under ____.

DEGREE OF REVIEW

- ☒ Documentation was reviewed.
- ☐ Field investigation was performed.
- ☐ Discussed and/or contacted appropriate office about project.
- ☐ Additional documentation/research is required.
- ☐ Comments attached.

SIGNED

Duncan Jay Cairns
Chief, Bur. Env. & Res. Plng.

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JUN 03 2003

OIP/OLGA

COUNTY: OKALOOSA

DATE: 5/15/2003

COMMENTS DUE DATE: 6/14/2003

CLEARANCE DUE DATE: 7/14/2003

SAI#: FL200305152121C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS	X NORTHWEST FLORIDA WMD	ENVIRONMENTAL POLICY UNIT	
ENVIRONMENTAL PROTECTION			
FISH and WILDLIFE COMMISSION			
STATE			
TRANSPORTATION			

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

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- X Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.
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- Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

Project Description:

DEPARTMENT OF AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR CONSTRUCTION - OPERATION - AND MAINTENANCE OF A WASTE WATER TREATMENT FACILITY AND ASSOCIATED RAPID INFILTRATION BASE SYSTEM - EGLIN AIR FORCE BASE - OKALOOSA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA Federal Consistency

- ☒ No Comment
☐ Comment Attached
☐ Not Applicable
- ☐ No Comment/Consistent
☐ Consistent/Comments Attached
☐ Inconsistent/Comments Attached
☐ Not Applicable

NO COMMENTS

From: NWFWM

Division/Bureau: RESOURCE MANAGEMENT
Reviewer: JUAN JAY CARRAS
Date: 29 MAY 2003

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JUN 03 2003

OIP/OLGA

COUNTY: OKALOOSA

DATE: 5/15/2003

COMMENTS DUE DATE: 6/14/2003

CLEARANCE DUE DATE: 7/14/2003

SAI#: FL200305152121C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS	NORTHWEST FLORIDA WMD	X ENVIRONMENTAL POLICY UNIT	
ENVIRONMENTAL PROTECTION			
FISH and WILDLIFE COMMISSION			
STATE			
TRANSPORTATION			

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Project Description:

DEPARTMENT OF AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR CONSTRUCTION - OPERATION - AND MAINTENANCE OF A WASTE WATER TREATMENT FACILITY AND ASSOCIATED RAPID INFILTRATION BASE SYSTEM - EGLIN AIR FORCE BASE - OKALOOSA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA Federal Consistency

☒ No Comment☐ Comment Attached☐ Not Applicable☐ No Comment/Consistent☐ Consistent/Comments Attached☐ Inconsistent/Comments Attached☐ Not Applicable

From:

Division/Bureau:

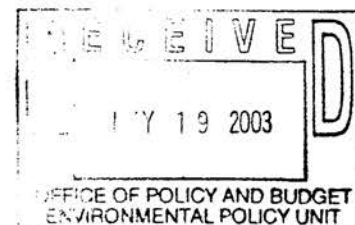
Reviewer:

Date:

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JUN 09 2003

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COUNTY: OKALOOSA

DATE: 5/15/2003

COMMENTS DUE DATE: 6/14/2003

CLEARANCE DUE DATE: 7/14/2003

SAI#: FL200305152121C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
COMMUNITY AFFAIRS	NORTHWEST FLORIDA WMD	ENVIRONMENTAL POLICY UNIT	X FT. WALTON BEACH
ENVIRONMENTAL PROTECTION			OKALOOSA
FISH and WILDLIFE COMMISSION			WEST FLORIDA RPC
STATE			
TRANSPORTATION			

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- ☐ Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.
- ☒ Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.
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Project Description:

DEPARTMENT OF AIR FORCE - DRAFT ENVIRONMENTAL ASSESSMENT FOR CONSTRUCTION - OPERATION - AND MAINTENANCE OF A WASTE WATER TREATMENT FACILITY AND ASSOCIATED RAPID INFILTRATION BASE SYSTEM - EGLIN AIR FORCE BASE - OKALOOSA COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA Federal Consistency

- | | |
|--|---|
| <input checked="" type="checkbox"/> No Comment | <input type="checkbox"/> No Comment/Consistent |
| <input type="checkbox"/> Comment Attached | <input type="checkbox"/> Consistent/Comments Attached |
| <input type="checkbox"/> Not Applicable | <input type="checkbox"/> Inconsistent/Comments Attached |
| | <input type="checkbox"/> Not Applicable |

From:

Division/Bureau: DEPT. PUBLIC WORKS
Reviewer: JOHN HOFSTAD
Date: 6-10-03

CITY OF FORT WALTON BEACH
DEPARTMENT OF
COMMUNITY DEVELOPMENT SERVICES
PLANNING DIVISION

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
Rosalyn Kilcollins	L.B. Mitchell, Planning Mgr.
ORGANIZATION:	DATE:
Florida State Clearinghouse	6-10-03
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
(850) 245-2190	2 PAGES
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
(850) 245-2174	
RP:	YOUR REFERENCE NUMBER:
SAI#FL200305152121C	EO.12372/NEPA Fed. Consistency

☒ PLEASE YOUR REQUEST

NOTES/COMMENTS:

PLEASE, SEE ATTACHED-NO COMMENT

P.O. BOX 4009- FORT WALTON BEACH, FLORIDA 32549

JUN 09 '2003 10:06

FL20030515-2121C

#6637 P.001/001 ?

**WEST FLORIDA REGIONAL PLANNING COUNCIL**

Post Office Box 9759 • 3435 North 12th Avenue • Pensacola, Florida 32513-9759
 Phone (850) 595-8910 • S/C 695-8910 • (800) 226-8914 • Fax (850) 595-8967

Lel Czeck
 Executive Director

Cody Taylor
 Chairman

Sydney Joel Pate
 Vice-Chairman

FAX TRANSMITTAL (S) Total # of Pages (including cover): 1

TO: STATE CLEARINGHOUSE • FAX: (850) 245-2190/(850) 245-2189
Phone: 850-245-2161

DATE: June 9, 2003

FROM: *gnf*
 Jerrie Nelson Lewis, Intergovernmental Review Coordinator
 Extension 226
 lewisj@wfrpc.dst.fl.us

SUBJECT: State Clearinghouse Review(s) Fax Transmittals:

SAI #	Project Description	RPC #
FL2003051521221C	Department of Air Force – Draft Environmental Assessment for Construction – Operation and Maintenance of a Waste Water Treatment Facility and Associated Rapid Infiltration Base System – Eglin Air Force Base – Okaloosa County, Florida.	0616-05-20-2003

X	No Comments – Generally consistent with the WFSRPP
	Comments Attached

If you have any questions, please call.

"...Serving Escambia, Santa Rosa, Okaloosa, Walton, Bay, Holmes & Washington Counties and their municipalities..."

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